SAMSUNG

SPLIT-TYPE AIR CONDITIONER

Basic : AS12HPCN
Model : AS12HM3

SERVICE Manual

AIR CONDITIONER

AS09HPCN/AS12HPCN/AS09HPDN/AS12HPDN

AS09HPCX/AS12HPCX/AS09HPDX/AS12HPDX

THE FEATURE OF PRODUCT

- **Energy Saving Function**
- **High Impressive & Elegant Design**
- **Excellent Dust Collection Filter**
  : The metallic dust filter is used.
- **Multi Functional Cleaning System**
  : The anti allergy filter and activated deodorizing filter are adopted.
- **Human Touch Remote control**

For more information, Please access to our service web site (http://itself.sec.samsung.co.kr)

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1. Precautions

1-1 Installing the air conditioner

- Users should not install the air conditioner by themselves.
  Ask the dealer or authorized company to install the air conditioner except the window-type air conditioner in U.S.A and Canada.
- If you don't install the air conditioner properly, it may cause a fire, a water leakage or an electric shock.
- You must install the air conditioner according to the national wiring regulations and safety regulations.
- Install the indoor unit higher than 2.5m from the floor to avoid the injury caused by the operation of the fan.
  (except the window-type air conditioner)
- The manufacturer is not responsible for any accidents or injury caused by an incorrect installation.
- When installing the built-in type air conditioner, keep all electric cables such as the power cable and the connection cord in pipes, ducts, or cable channels to protect them from the danger of impact or any other incidents.

1-2 Power supply and circuit breaker

- If the power cord of the air conditioner is damaged, it must be replaced by the manufacturer or a qualified person in order to avoid a hazard.
- The air conditioner must be plugged into an independent circuit if applicable or connect the power cable to the auxiliary circuit breaker.
  An all pole disconnection from the power supply must be incorporated in the fixed wiring with a contact opening of >3mm.
- Do not extend an electric cord to the air conditioner.
- The air conditioner must be plugged in after you complete the installation.

1-3 During operation

- Do not repair the air conditioner at your discretion.
  It is recommended to contact a service center directly.
- Never spill any kind of liquid on the air conditioner.
  If this happens, turn off the air conditioner and contact an authorized service center.
- Do not insert anything between the airflow blades to prevent damage of the inner fan and consequent injury.
  Keep children away from the air conditioner.
- Do not place any obstacles in front of the air conditioner.
- Do not spray any kind of liquid into the indoor unit. If this happens, turn off the air conditioner and contact a service center.
- Make sure that the air conditioner is well ventilated at all times:
  Do not place a cloth or other materials over it.
- Remove the batteries if you don't use the remote control for a long time. (If applicable)
- Use the remote control within 7 meters from the indoor unit. (If applicable)

1-4 Disposing of the unit

- Before throwing out the air conditioner, remove the batteries from the remote control.
- When you dispose of the air conditioner, consult your dealer. If pipes are removed incorrectly, refrigerant may blow out and cause air pollution. When it contacts with your skin, it can cause skin injury.
- The package of the air conditioner should be recycled or disposed of properly for environmental reasons.

1-5 Others

- Never store or load the air conditioner upside down or sideways to prevent the damage to the compressor.
- Young children or infirm persons should be always supervised when they use the air conditioner.
- Max current is measured according to IEC standard for safety.
- Current is measured according to ISO standard for energy efficiency.

2. Product Specifications

2-1 The Feature of Product

■ **Energy saving function**

Makes a room cool with and energy saving and arises the efficiency of air conditioner.

■ **High impressive & elegant design**

With a Smart and fashionable style, the high impressive interior design allow this product to set place in anywhere.

■ **Excellent dust collection filter**

With a metallic dust filter that upgrades the dust collection function than a common plastic filter, you can enjoy the best cleanliness.

■ **Multi functional cleaning system**

With an anti-allergy filter and activated deodorizing filter, it removes an allergy antigen as well as a tobacco odor.

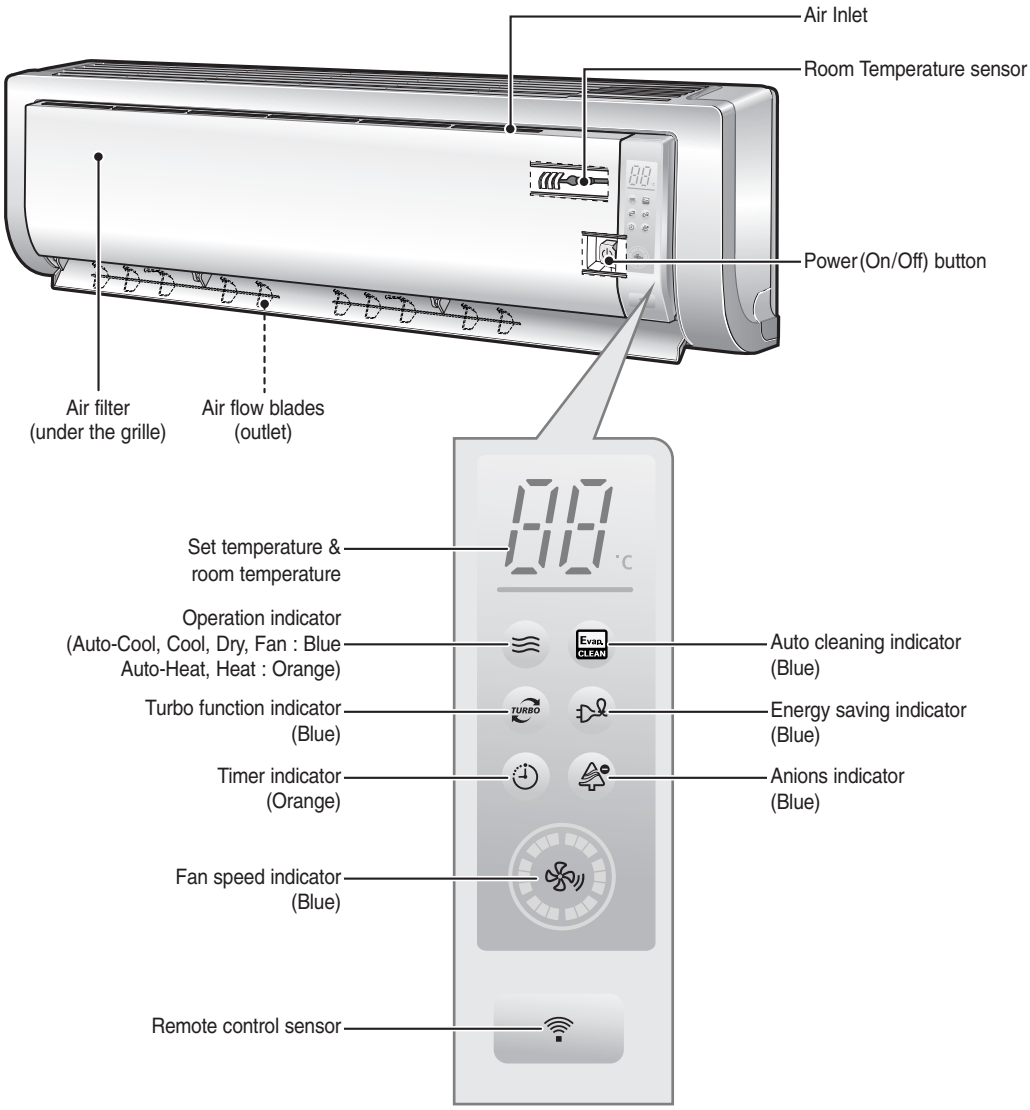
■ **Human touch remote control**

The use of air conditioner is easier and more convenient by the human touch remote control of new design.

2-2 Name of Each Part

2-2-1 Indoor Unit

The design and shape can be changed according to the model.



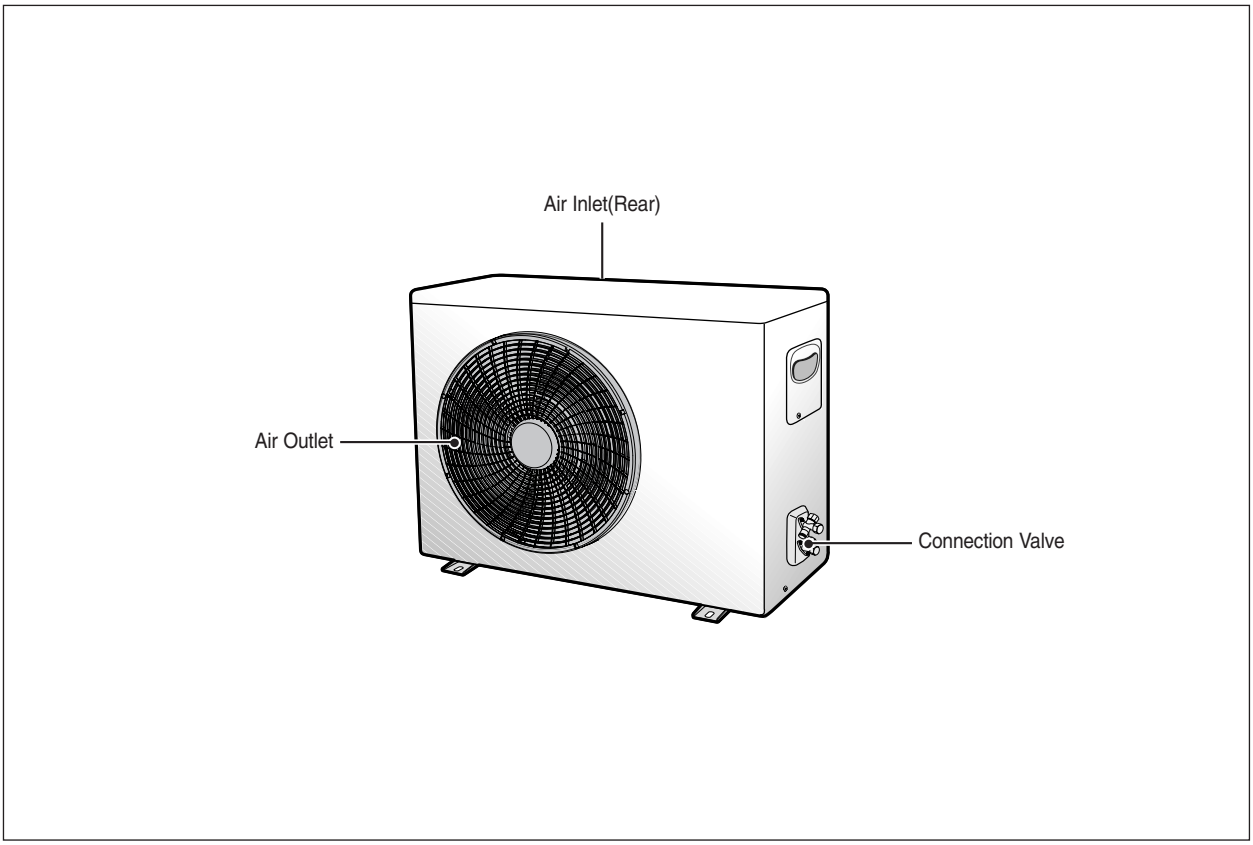
Note : • In the Auto mode, 2 fan indicators increase and decrease continuously and turn round.

• In the modes except the Auto mode, the fan speed indicator increases and decreases continuously and turn round each time you press the button. If you set the Turbo function, the fan speed indicator turns round with the maximum setting and speed.

• If you want to turn on/off the Display during operation, press the Digital / On/Off button on the remote control.

• The room temperature sensor senses air temperature around the sensor, and shows the temperature on the display.

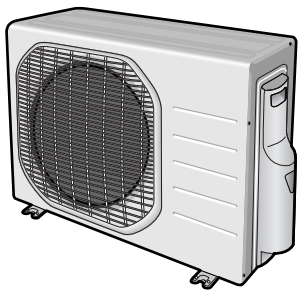
2-2-2 Outdoor Unit

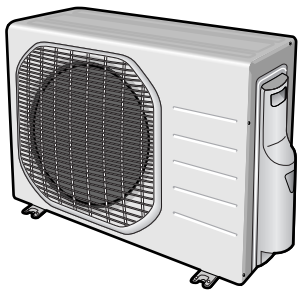


2-3 Product Specifications

Item				Model	AP09HPC AS09HPD		AS12HPC AS12HPD	
					Indoor unit	Outdoor unit	Indoor unit	Outdoor unit
Type					Wall-mounted		Wall-mounted	
Performance	Cooling			kW	2.70		3.50	
	Heating			kW	2.90		3.80	
	Dehumidifying			ℓ/h	1.0		1.4	
	Air Volume	Cooling		m^3/min (H/M/L)	7.5/6.9/6.3	25	8.3/7.0/5.7	25
		Heating			8.0/7.4/6.8	25	9.5/8.9/8.3	25
	Noise	Cooling		dB (H/L)	40/30	51	43/31	53
		Heating			40/30	51	43/31	53
	Energy Efficiency Ratio	Cooling		W/W	3.21		3.21	
		Heating			3.41		3.22	
	Power			ph-V-Hz	1-220/240-50		1-220/240-50	
Power	Power Consumption	Cooling		W	840		1,090	
		Heating			850		1,180	
	Operating Current	Cooling		A	3.7		5.0	
		Heating			3.7		5.3	
	Power Factor	Cooling		%	97.3		98.7	
		Heating			97.3		96.8	
	Starting Current			A	21		28	
	Power Cord	Length		m	2.1		2.1	
		Number of Core Wire			5G		5G	
		Capacity		A	250V-10A		250V-10A	
Size	Outer Dimension	WidthxHeight xDepth		mm	950x268x165	720x530x260	950x268x165	720x530x260
				inch	37.4x10.6x6.5	28.3x20.9x10.2	37.4x10.6x6.5	28.3x20.9x10.2
	Weight(Net)			kg	9.0	31.0	9.5	33.0
	Refrigerant Pipe	Liquid		mmxL(m)	ø6.35x5		ø6.35x5	
		Gas		mmxL(m)	ø9.52x5		ø12.70x5	
	Drain Hose			DxL(mm)	ø18x550		ø18x550	
	Compressor	Type			Rotary, G4A091JU1EP		Rotary, G4B124JU2EL	
		Motor	Type		Induction Motor(PSC)		Induction Motor(PSC)	
			Rated Output		930		1,267	
	Oil Type				DAPHNE FV685(PVE)		DAPHNE FV685(PVE)	
	Blower	Type			Cross-flow	Propeller	Cross-flow	Propeller
		Motor	Type		Resin/steel	steel	Resin/steel	steel
			Rated Output	W	15	50	15	50
Heat Exchanger					2ROW 12STEP	1ROW 24STEP	2ROW 12STEP	2ROW 24STEP
Refrigerant Control Unit					CAPILLARY TUBE		CAPILLARY TUBE	
Freezer Oil Capacity				cc	280		500	
Refrigerant to Change(R410A)				g	580		900	
Protection Device(OLP)					RBC12054-12500		RBC12127-12500	
Cooling Test Condition					INDOOR UNIT : DB27˚C WB19˚C		OUTDOOR UNIT : DB35˚C WB24˚C	
Maximum Operation Condition					INDOOR UNIT : DB32˚C WB23˚C		OUTDOOR UNIT : DB43˚C WB26˚C	

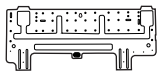
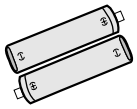
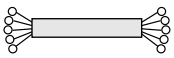
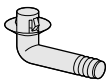
2-4 The Comparative Specifications of Product

Item		AS09HPC/AS09HPD	AS09HPB
Design	Indoor Unit		
	Outdoor Unit		
Net Weight	Indoor Unit	9.0kg	9.0kg
	Outdoor Unit	31.0kg	33.8kg
Outer Dimension	Indoor Unit	950x268x165mm	950x268x165mm
	Outdoor Unit	720x530x260mm	790x548x285mm
Noise	Indoor Unit	40dB↓	40dB↓
	Outdoor Unit	51dB↓	51dB↓
Air Purifying System	Filter	Silver Nano Metallic Filter Anti-Allergy Filter Deodorizing Filter	Silver Nano Metallic Filter Anti-Allergy Filter Deodorizing Filter
Indoor Display		Detachable Display Rotation Blue LED Display	Detachable Display Rotation Blue LED Display

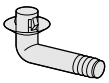
Item		AS12HPC/AS12HPD	AS12HPB
Design	Indoor Unit		
	Outdoor Unit		
Net Weight	Indoor Unit	9.0kg	9.0kg
	Outdoor Unit	33.0kg	36.0kg
Outer Dimension	Indoor Unit	950x268x165mm	950x268x165mm
	Outdoor Unit	720x530x260mm	790x548x285mm
Noise	Indoor Unit	43dB↓	43dB↓
	Outdoor Unit	53dB↓	53dB↓
Air Purifying System	Filter	Silver Nano Metallic Filter Anti-Allergy Filter Deodorizing Filter	Silver Nano Metallic Filter Anti-Allergy Filter Deodorizing Filter
Indoor Display		Detachable Display Rotation Blue LED Display	Detachable Display Rotation Blue LED Display

2-5 Accessory and Option Specifications

2-5-1 Accessories

Item	Descriptions	Code-No.	Q'TY	Remark
	Installation Plate	DB70-00514A	1	Indoor Unit
	Remote Control	DB93-03016R	1	
	Batteries for Remote Control	DB47-90024A	2	
	User's Manual	DB98-24445A	1	
	Installation Manual	DB98-24444A	1	
	5-wire Assembly Cable	-	1	Outdoor Unit
	Drain Plug	DB67-20011A	1	
	Rubber Leg	DB73-00179A	4	
	Assembly Pipe, ø6.35mm	DB96-10453B	1	Accessory Box
	Assembly Pipe, ø12.70mm(**12**)	DB62-70003E	1	

Accessories(cont.)

Item	Descriptions	Code-No.	Q'TY	Remark
	Assembly Pipe, ø9.52mm(**09**)	DB96-04578G	1	Accessory Box
	Vinyl Tape, Width 50mm	DB72-00459A	1	
	Drain Plug	DB67-20011A	1	
	Rubber Leg	DB73-00179A	4	
	Pipe Clamps A	DB39-20224A	3	
	Pipe Clamps B	DB39-20224B	3	
	Cement Nail	-	6	
	M4x16 Tapping Screws	6002-000215	6	
	Drain Hose, length 2m	DB62-00487A	1	
	Putty 100g	DB98-10568A	1	

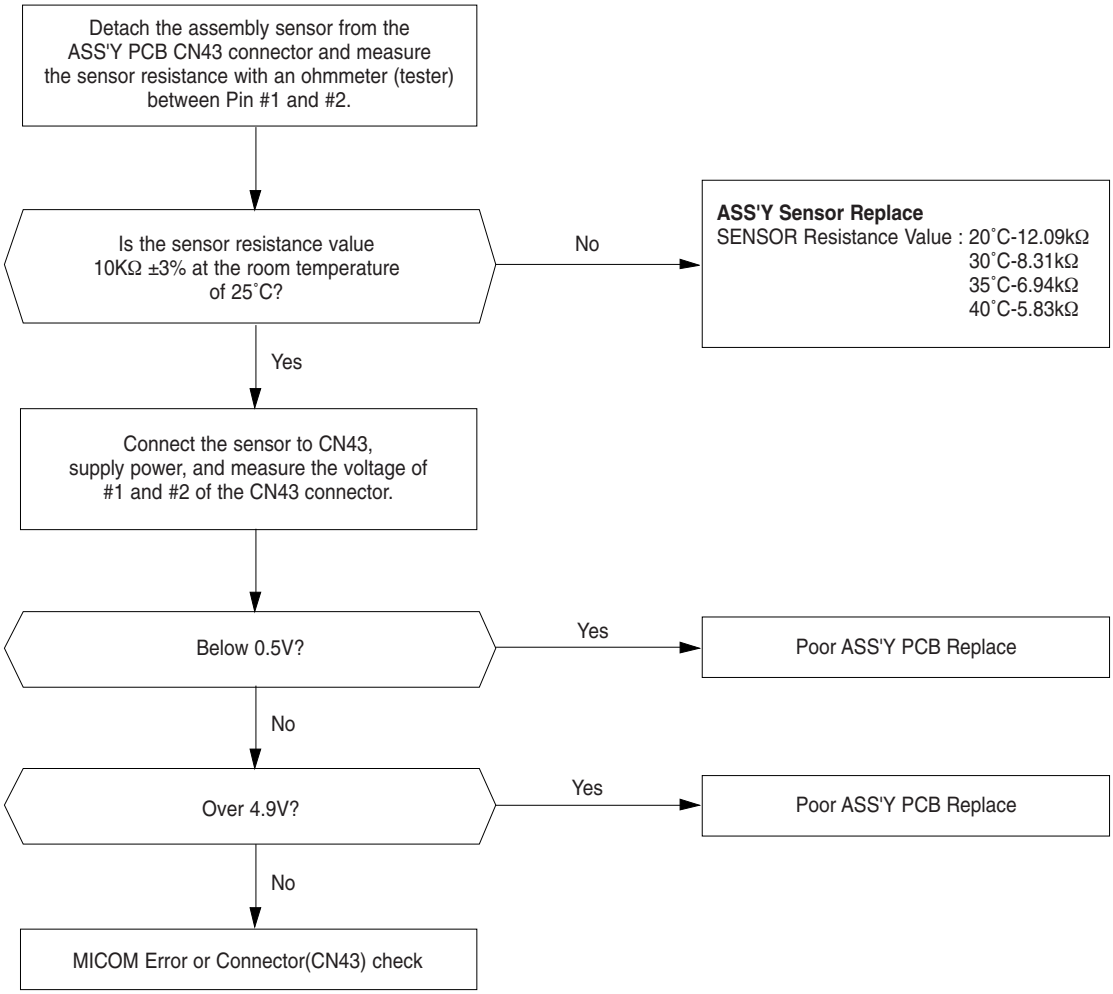
3. Alignment and Adjustments

3-1 Error mode and check method

Error Mode	LAMP	7-segment Display
Indoor unit room temperature sensor error (open or short)		E1
Indoor unit heat exchanger temperature sensor error (open or short)		E2
Indoor fan motor malfunction		E3
EEPROM error		E6
Option error (option wasn't set up or option data error)		Display Flickering

3-1-1 Room temperature sensor Error

Error Mode	LAMP	7-segment Display
Indoor unit room temperature sensor error(open or short)		E 1


Detach the assembly sensor from the ASS'Y PCB CN43 connector and measure the sensor resistance with an ohmmeter (tester) between Pin #1 and #2.
Is the sensor resistance value 10KΩ ±3% at the room temperature of 25˚C?
No
ASS'Y Sensor Replace
SENSOR Resistance Value : 20˚C-12.09kΩ
30˚C-8.31kΩ
35˚C-6.94kΩ
40˚C-5.83kΩ
Yes
Connect the sensor to CN43, supply power, and measure the voltage of #1 and #2 of the CN43 connector.
Below 0.5V?
Yes
Poor ASS'Y PCB Replace
No
Over 4.9V?
Yes
Poor ASS'Y PCB Replace
No
MICOM Error or Connector(CN43) check

3-1-2 Room Pipe sensor Error

Error Mode	LAMP	7-segment Display
Indoor unit heat exchanger temperature sensor error (open or short)		E2

1. Check the assembly condition of the sensor connector(CN43) on the indoor unit Main PCB and if not assembled, reassemble the connector accurately.

2. Detach the room pipe sensor connector(CN43) and check the resistance between Pin #3 and #4.

Temperature(˚C)	Resistance Value(Kohm)	Temperature(˚C)	Resistance Value(Kohm)	Others
15	14.68	30	8.31	The data tolerance is ±3%.
20	12.09	35	6.94	
25	10	40	5.83	

   If the above data is not met, replace the room pipe sensor.

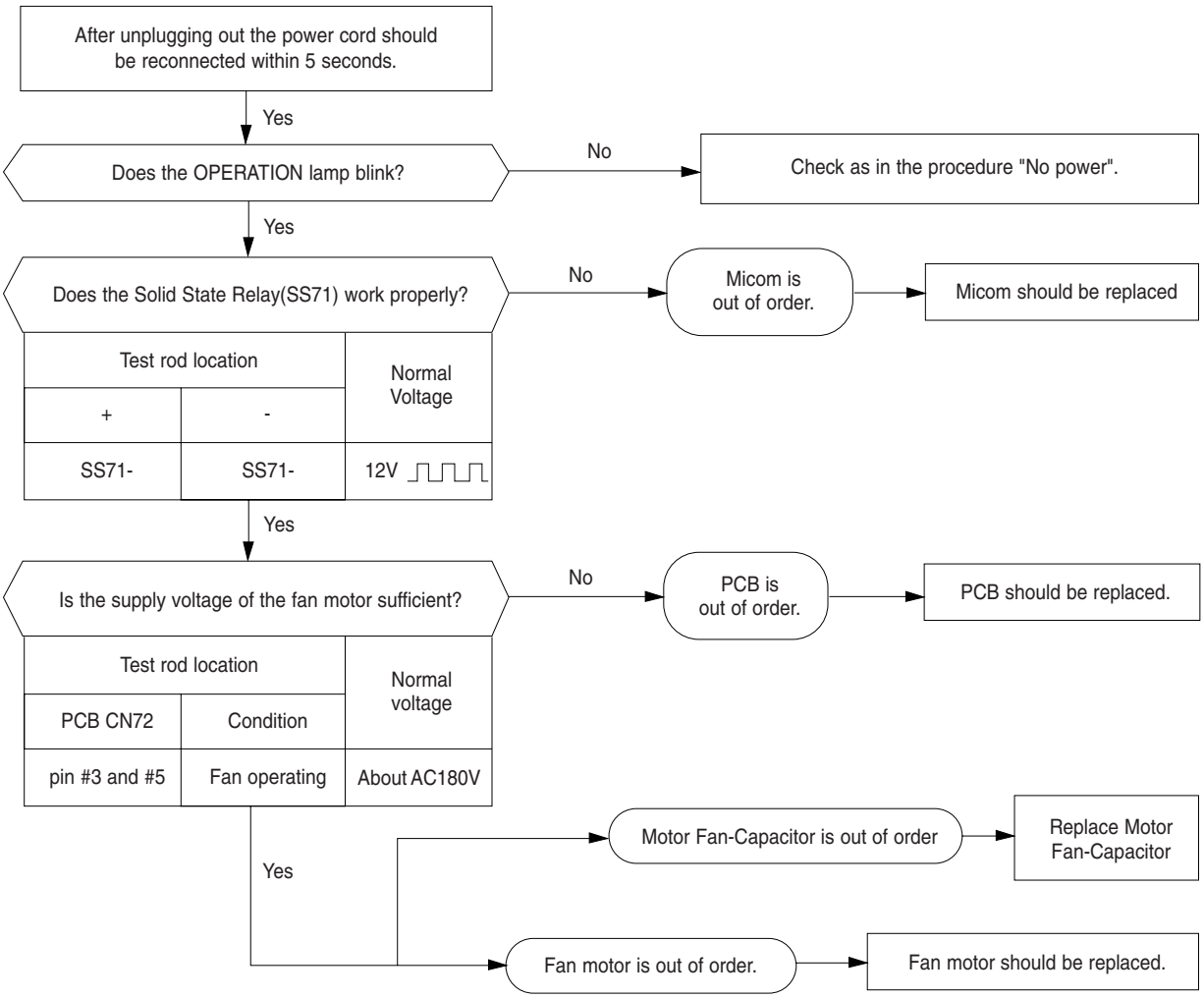
3. Assemble the room pipe sensor to PCB, plug in, and check the voltage of connector 3 and 4. If the resistance is below 0.5V or over 4.9V, replace the indoor Main PCB. (short or disconnected in the PCB board)

3-1-3 Indoor Unit Fan Motor Error

Error Mode	LAMP	7-segment Display
Indoor Unit Fan Motor Malfunction		E3

1. Checklist :
   1) Is the indoor unit fan motor properly connected with the connector (CN72)?
   2) Is the AC voltage correct?
   3) Is HALL IC in indoor fan motor properly connected with the connector (CN44)?
   4) Is the running capacitor (CR71) properly connected with PCB board?

2. Troubleshooting procedure



3-2 Setting Option Setup Method

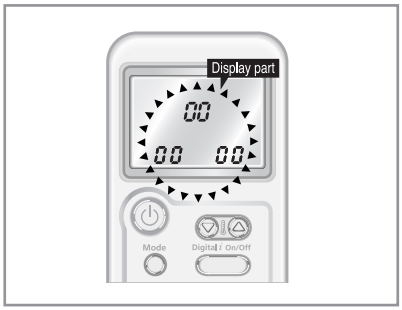
ex) Option No. : 066064- 170373

Step 1 : **Enter the Option Setup mode.**

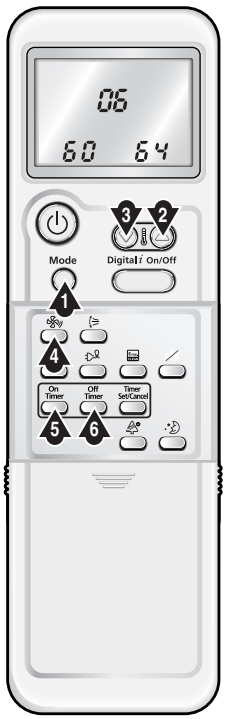
1st Take out the batteries of remote control.

2nd Press the temperature button simultaneously and insert the battery again.

3rd Make sure the remocon display shown as 00 00 00.



Step 2 : **Enter the Option Setup mode and select your option according to the following procedure.**



✳ Setting is not required if you must 0 a value which has a 0 default.

1

The default value is 00 00 00.
Otherwise, push the Mode button to 0.
Every time you push the button, the display panel reads 1 or 0 repeatedly.

2

Push the ▲ button to set the display panel to 6.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

3

Push the ▼ button to set the display panel to 6.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

4

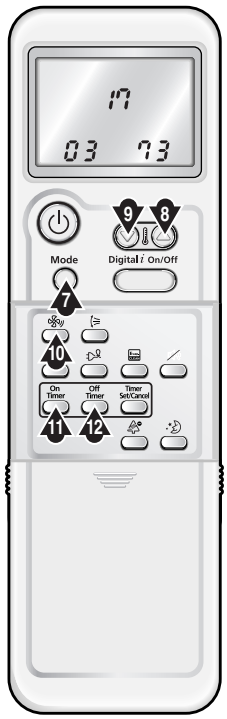
Push the button to set the display panel to 0.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

5

Push the On Timer button to set the display panel to 6.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

6

Push the Off Timer button to set the display panel to 4.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.



✳ Setting is not required if you must 0 a value which has a 0 default.

7 Press Mode button, then the default value is 00 10 00 .

8 Push the button to set the display panel to 7.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ · · · 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

9 Push the button to set the display panel to 0.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ · · · 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

10 Push the button to set the display panel to 3.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ · · · 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

11 Push the On Timer button to set the display panel to 7.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ · · · 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

12 Push the Off Timer button to set the display panel to 3.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ · · · 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

Step 3 : Upon completion of the selection, check you made right selections.

Press the Mode Selection key, Mode to set the display part to 0 and check the display part.

➡ The display part shows 60 06 64 .

Press the Mode Selection key, Mode to set the display part to 1 and check the display part.

➡ The display part shows 03 17 73 .

Step 4 : Pressing the ON/OFF button ( )

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON( ) lamp of the display is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5 : Unit operation test-run

First, Remove the battery from the remote control.

Second, Re-insert the battery into the remote control.

Third, Press ON/OFF key with the direction of remote control for set.

• Error Mode

1st If all lamps of indoor unit are flickering, plug out, plug in power plug again and press the ON/OFF key to retry.

2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for its model.

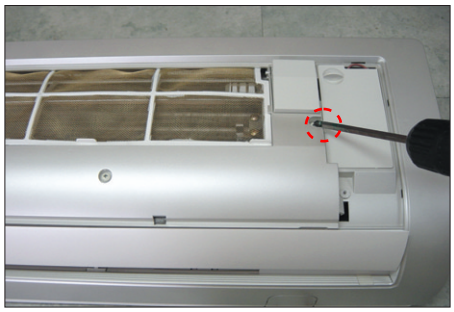
■ OPTION ITEMS

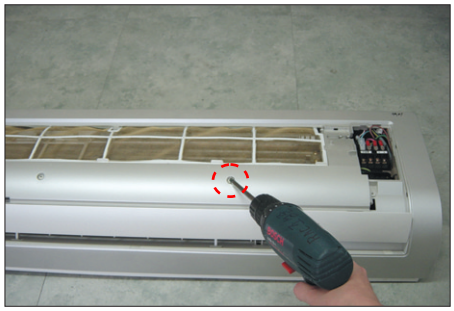
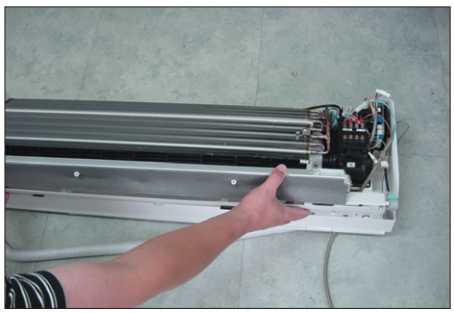
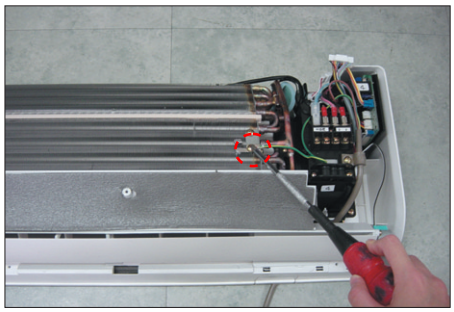
REMOCON / MODEL	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
AS09HPC	0	2	7	0	2	4	1	7	1	2	1	8
AS09HPD	0	2	7	0	2	4	1	7	0	2	1	8
AS12HPC	0	2	7	0	2	6	1	7	1	2	6	9
AS12HPD	0	2	7	0	2	6	1	7	0	2	6	9

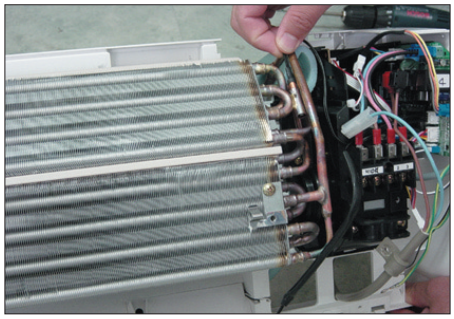
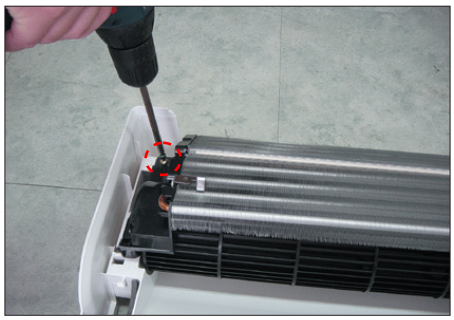
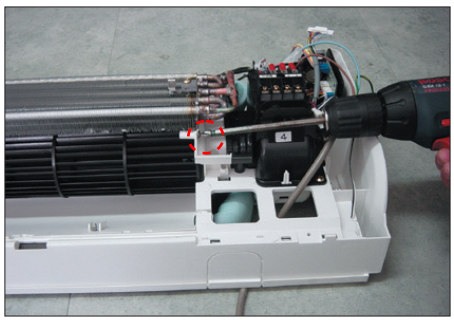
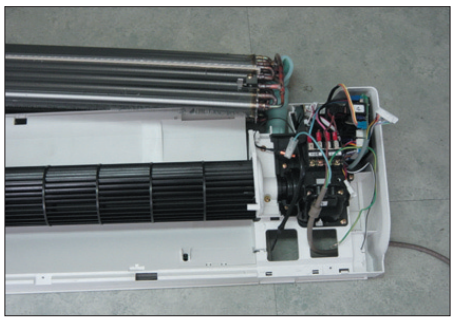
4. Disassembly and Reassembly

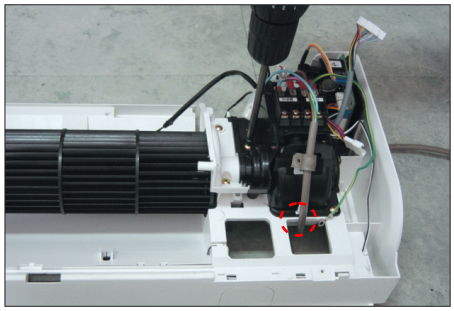
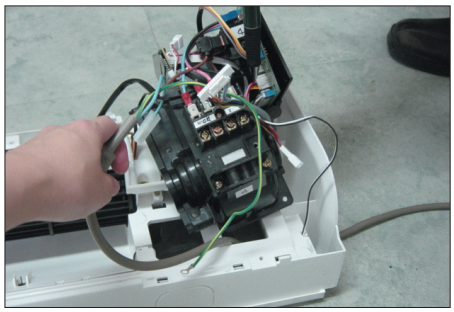
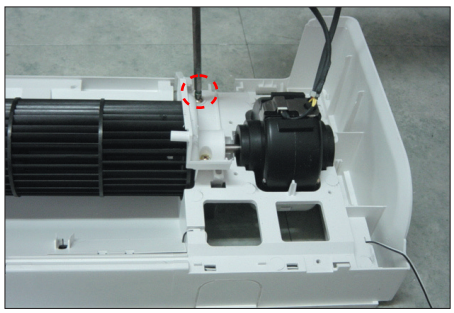
Stop operation of the air conditioner and remove the power cord before repairing the unit.

4-1 Indoor Unit

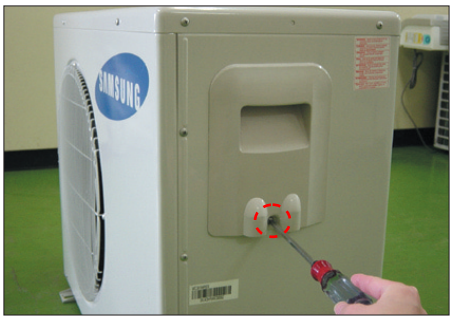
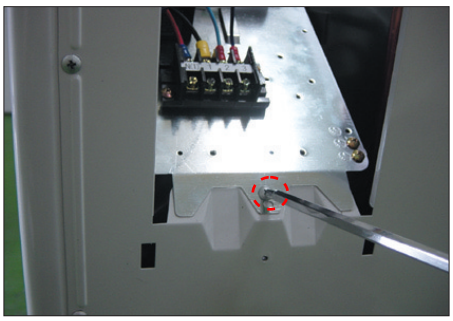
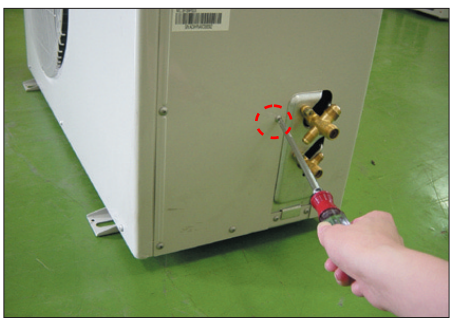
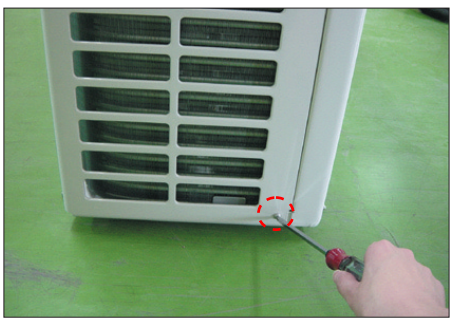
No	Parts	Procedure	Remark
1	Panel Front	1) Stop the air conditioner operation and shut off the main power.	
		2) Detach the Front Grille after pushing out it.	
		3) Loosen 1 of the right screw and detach the Ass'y display.	
		4) Loosen 1 of the right screw and detach the Terminal Cover. 5) Detach the cover PCB-DVM and thermistor from the Panel Front.	

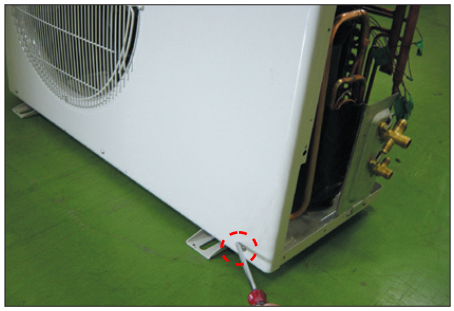
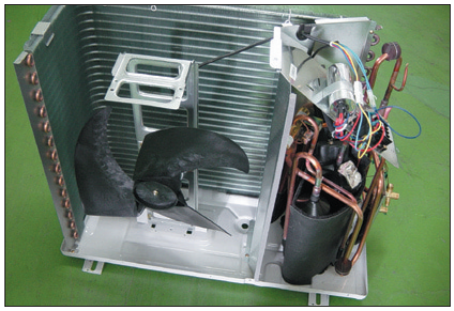
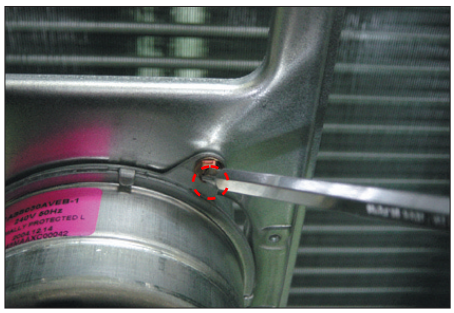
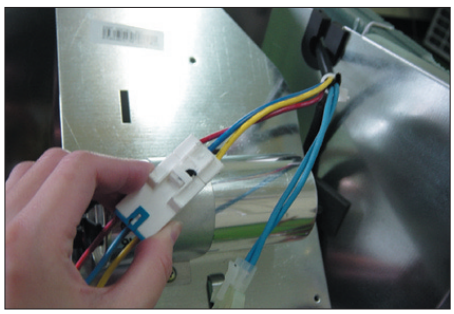
No	Parts	Procedure	Remark
		6) Loosen 5 fixing screws of Panel Front.	
		7) Unlock 2 hooks to fix Panel Front and Tray Drain. 8) Unlock 2 hooks to fix Panel Front and Back Body.	
2	Tray Drain	1) Detach the connected wire of Stepping Motor. 2) Pull Tray Drain out from the Back Body.	
3	Heat Exchanger	1) Loosen 1 fixing earth screw of right side.	

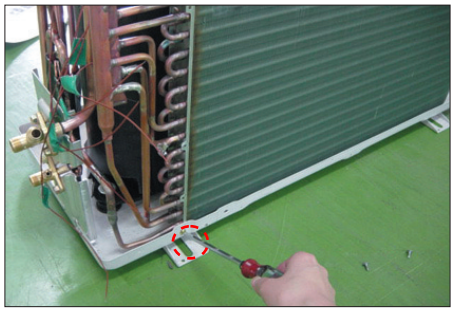
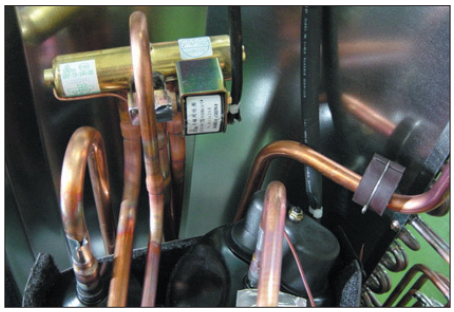
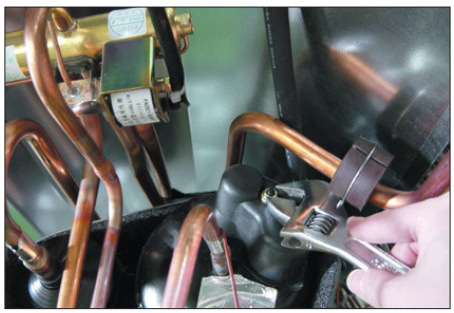
No	Parts	Procedure	Remark
		2) Detach the Room Sensor.	
		3) Detach the Holder Pipe at the rear side of the unit.	
		4) Loosen 3 fixing screws of left Holder Evap.	
		5) Loosen 1 fixing screw of right Holder Motor.	
		6) Detach the Heat Exchanger from the indoor unit.	

No	Parts	Procedure	Remark
4	Electrical Parts (Main PCB)	1) Loosen 4 fixing screws of right Holder control. 2) Take all the connector of PCB upper side out.(Including Power Cord) 3) Detach the outdoor unit connection wire from the Terminal Block. 4) Pull the PCB up to detach.	 
5	Fan Motor & Cross Fan	1) Loosen 2 fixing screws and detach the Motor Holder. 2) Loosen 1 fixing screw of Fan Motor. 3) Detach the Fan Motor from the Fan. 4) Detach the Fan from the left Holder Bearing.	

4-2 Outdoor Unit

No	Parts	Procedure	Remark
1	Common Work	1) Unplug the electric power before disassembling.	
		2) Loosen the fixing screws of the Cover Control.	
		3) Loosen the fixing screws of the Plate Control.	
		4) Loosen the fixing screws of the Cabinet-Side RH.	
		5) Loosen the fixing screws of the Cabinet-Side LF.	

No	Parts	Procedure	Remark
		6) Loosen the fixing screws of the Cabinet-Front.	 
2	Fan & Motor	1) Remove the Nut Flange. (Turn to the clockwise.) 2) Detach the Fan.	
		3) Loosen 4 fixing screws to detach the Motor.	
		4) Disconnect the wire between Ass'y Control Out and Fan.	

No	Parts	Procedure	Remark
3	Common Work	1) Loosen the fixing screws of the Bracket Motor.	
4	Heat Exchanger	1) Loosen 2 fixing screws on both sides.	
		2) Disassemble the pipe in both inlet and outlet with welding torch. 3) Detach the Heat Exchanger.	
5	Compressor	1) Loosen the Nut to open the Terminal Cover. 2) Disassemble the Cloth Sound Felt. 3) Disassemble the pipe in both inlet and outlet of the Compressor with welding torch.	
		4) Loosen 3 bolts at the bottom of the Compressor. 5) Detach the Compressor.	

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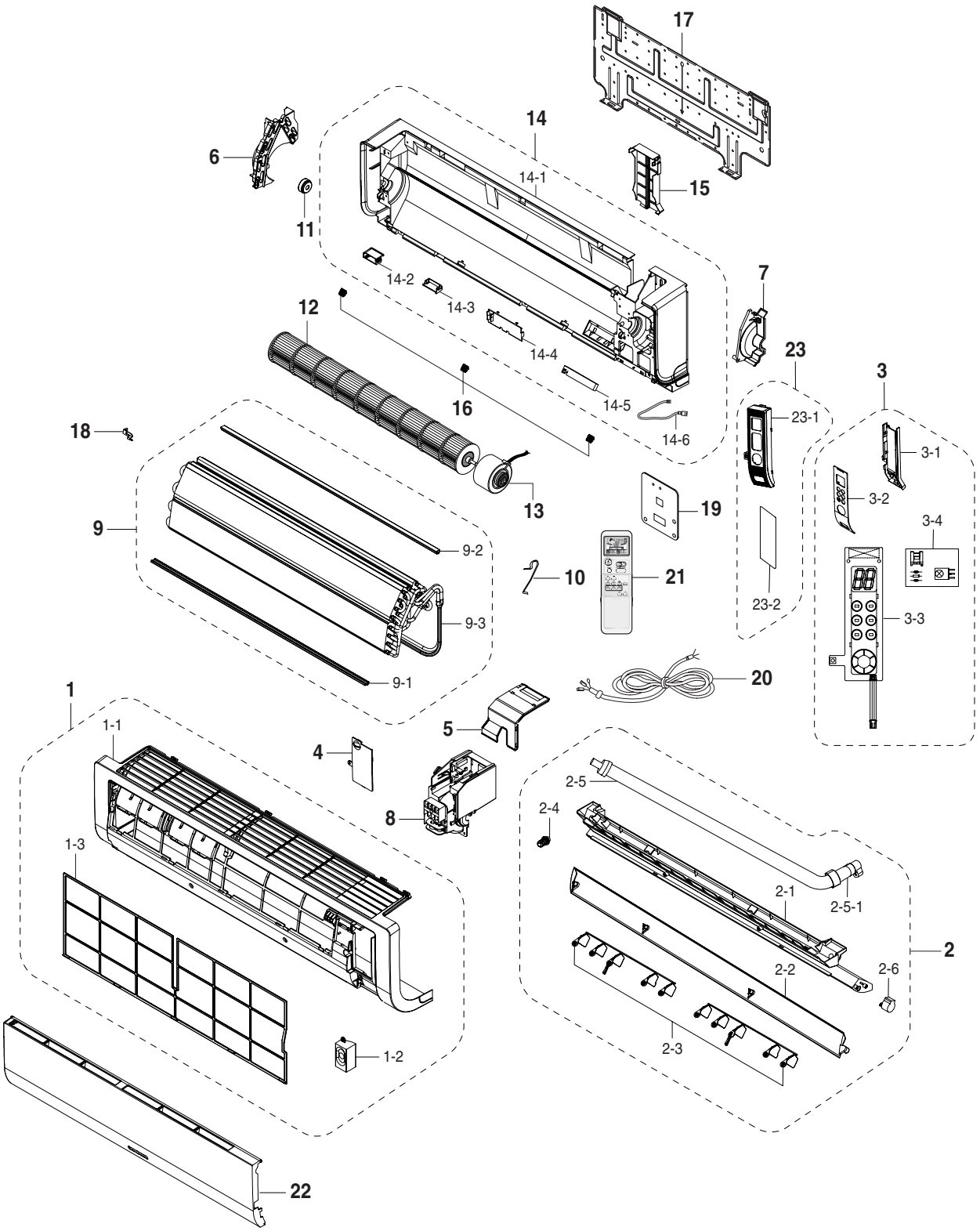
5. Exploded Views and Parts List

5-1 Indoor Unit



■ **Parts List**

No.	Code No.	Description	Specification	Q'TY		SA/SNA	Remark
				AS09HPCN	AS12HPCN		
1	DB92-00633B	ASS'Y PANEL FRONT	ASS'Y	1	1	SA	
1-1	DB64-01210A	PANEL FRONT	HIPS	1	1	SNA	
1-2	DB93-02831A	ASS'Y SPEAKER UNIT	ASS'Y	-	-	SNA	
1-3	DB63-01103A	FILTER-PRE	PP	1	1	SA	
2	DB94-00629G	ASS'Y TRAY DRAIN	ASS'Y	1	1	SA	
2-1	DB63-01104A	TRAY DRAIN	ABS	1	1	SNA	
2-2	DB61-02049A	BLADE-H	ABS	1	1	SA	
2-3	DB61-02053A	BLADE-V	PP	2	2	SA	
2-4	DB73-00234A	RUBBER-CAP DRAIN	CR	1	1	SA	
2-5	DB94-00062N	ASS'Y DRAIN-HOSE	ASS'Y	1	1	SA	
2-5-1	DB67-00510A	DRAIN-CUFF	ABS	1	1	SNA	
2-6	DB95-20138A	ASS'Y MOTOR-STEPPING	24BYJ48	1	1	SA	
3	DB93-02960A	ASS'Y DISPLAY	ASS'Y	1	1	SA	
3-1	DB61-02056A	HOLDER DISPLAY	HIPS	1	1	SNA	
3-2	DB64-01211A	WINDOW DISPLAY	HIPS	1	1	SNA	
3-3	DB93-02806A	ASS'Y PCB DISPLAY	ASS'Y	1	1	SNA	
3-4	DB93-01369A	ASS'Y MODULE PCB	ASS'Y	1	1	SNA	
4	DB63-01106A	COVER TERMINAL	HIPS V0	1	1	SA	
5	DB63-01253A	COVER CONTROL	SGCC-M	1	1	SA	
6	DB61-02050A	HOLDER EVAP	ABS	1	1	SA	
7	DB61-02052A	HOLDER MOTOR	PP	1	1	SA	
8	DB93-02804B	ASS'Y CONTROL IN	ASS'Y	1	1	SA	
9	DB96-04464C	ASS'Y EVAP TOTAL	ASS'Y	-	1	SA	
	DB96-03835A	ASS'Y EVAP TOTAL	ASS'Y	1	-	SA	
9-1	DB60-00198A	SPACER-EVAP MID	PVC	1	1	SA	
9-2	DB60-00203B	SPACER-EVAP UP	PVC	1	1	SA	
9-3	DB96-04463B	ASS'Y EVAP	FP1.3, H-FIN, 2x12	-	1	SNA	
	DB96-03834A	ASS'Y EVAP	FP1.5, H-FIN, 2x12	1	-	SNA	
10	DB67-60030A	SPRING-SENSOR	STS 301	1	1	SA	
11	DB94-00674A	ASS'Y BEARING-RUBBER	ASS'Y, CR 45	1	1	SA	
12	DB94-00627A	ASS'Y-CROSS FAN	ø83 x 719	1	1	SA	
13	DB31-00270A	MOTOR FAN-IN	YDK-20S4D8C-1	1	1	SA	
14	DB94-00626A	ASS'Y BACK BODY	ASS'Y	1	1	SA	
14-1	DB61-02057A	BODY BACK	HIPS	1	1	SNA	
14-2	DB61-02047A	BUSH BODY LF	HIPS	1	1	SA	
14-3	DB61-02048A	BUSH BODY RH	HIPS	1	1	SA	
14-4	DB63-01105A	COVER-IONIZER	HIPS	1	1	SA	
14-5	DB91-00287A	ASS'Y ELECTRIC-IONIZER	ASS'Y	1	1	SA	
14-6	DB93-01383G	ASS'Y C/W ION	ASS'Y	1	1	SNA	
15	DB61-02051A	HOLDER-PIPE	HIPS	1	1	SA	
16	DB67-00508A	CAP SCREW	HIPS	3	3	SA	

■ **Parts List(cont.)**

No.	Code No.	Description	Specification	Q'TY		SA/SNA	Remark
				AS09HPCN	AS12HPCN		
17	DB70-00514A	PLATE-HANGER	SGCC-M, T0.8	1	1	SA	
18	DB70-00515A	PLATE CONTACT	SUS 304	1	1	SA	
19	DB70-00516A	PLATE-CONTROL IN	SGCC-M	1	1	SNA	
20	DB93-01549B	ASS'Y-CONNECTOR POWER	ASS'Y	1	1	SA	
21	DB93-03016R	ASS'Y REMOCON	ARH-1315	1	1	SA	
22	DB92-00643F	ASS'Y GRILLE	ASS'Y	1	1	SA	
23	DB90-01829F	ASS'Y COVER DISPLAY	ASS'Y	1	1	SA	
23-1	DB63-01108A	COVER DISPLAY	PC	1	1	SNA	
23-2	DB64-01276A	INLAY DISPLAY	ACRYL	1	1	SNA	

■ **Parts List**

No.	Code No.	Description	Specification	Q'TY		SA/SNA	Remark
				AS09HPDN	AS12HPDN		
1	DB92-00633A	ASS'Y PANEL FRONT	ASS'Y	1	1	SA	
1-1	DB64-01210A	PANEL FRONT	HIPS	1	1	SNA	
1-2	DB93-02831A	ASS'Y SPEAKER UNIT	ASS'Y	1	1	SNA	
1-3	DB63-01103A	FILTER-PRE	PP	1	1	SA	
2	DB94-00629G	ASS'Y TRAY DRAIN	ASS'Y	1	1	SA	
2-1	DB63-01104A	TRAY DRAIN	ABS	1	1	SNA	
2-2	DB61-02049A	BLADE-H	ABS	1	1	SA	
2-3	DB61-02053A	BLADE-V	PP	2	2	SA	
2-4	DB73-00234A	RUBBER-CAP DRAIN	CR	1	1	SA	
2-5	DB94-00062N	ASS'Y DRAIN-HOSE	ASS'Y	1	1	SA	
2-5-1	DB67-00510A	DRAIN-CUFF	ABS	1	1	SNA	
2-6	DB95-20138A	ASS'Y MOTOR-STEPPING	24BYJ48	1	1	SA	
3	DB93-02960A	ASS'Y DISPLAY	ASS'Y	1	1	SA	
3-1	DB61-02056A	HOLDER DISPLAY	HIPS	1	1	SNA	
3-2	DB64-01211A	WINDOW DISPLAY	HIPS	1	1	SNA	
3-3	DB93-02806A	ASS'Y PCB DISPLAY	ASS'Y	1	1	SNA	
3-4	DB93-01369A	ASS'Y MODULE PCB	ASS'Y	1	1	SNA	
4	DB63-01106A	COVER TERMINAL	HIPS V0	1	1	SA	
5	DB63-01253A	COVER CONTROL	SGCC-M	1	1	SA	
6	DB61-02050A	HOLDER EVAP	ABS	1	1	SA	
7	DB61-02052A	HOLDER MOTOR	PP	1	1	SA	
8	DB93-02804A	ASS'Y CONTROL IN	ASS'Y	1	1	SA	
9	DB96-04464C	ASS'Y EVAP TOTAL	ASS'Y	-	1	SA	
	DB96-03835A	ASS'Y EVAP TOTAL	ASS'Y	1	-	SA	
9-1	DB60-00198A	SPACER-EVAP MID	PVC	1	1	SA	
9-2	DB60-00203B	SPACER-EVAP UP	PVC	1	1	SA	
9-3	DB96-04463B	ASS'Y EVAP	FP1.3, H-FIN, 2x12	-	1	SNA	
	DB96-03834A	ASS'Y EVAP	FP1.5, H-FIN, 2x12	1	-	SNA	
10	DB67-60030A	SPRING-SENSOR	STS 301	1	1	SA	
11	DB94-00674A	ASS'Y BEARING-RUBBER	ASS'Y, CR 45	1	1	SA	
12	DB94-00627A	ASS'Y-CROSS FAN	ø83 x 719	1	1	SA	
13	DB31-00270A	MOTOR FAN-IN	YDK-20S4D8C-1	1	1	SA	
14	DB94-00626A	ASS'Y BACK BODY	ASS'Y	1	1	SA	
14-1	DB61-02057A	BODY BACK	HIPS	1	1	SNA	
14-2	DB61-02047A	BUSH BODY LF	HIPS	1	1	SA	
14-3	DB61-02048A	BUSH BODY RH	HIPS	1	1	SA	
14-4	DB63-01105A	COVER-IONIZER	HIPS	1	1	SA	
14-5	DB91-00287A	ASS'Y ELECTRIC-IONIZER	ASS'Y	1	1	SA	
14-6	DB93-01383G	ASS'Y C/W ION	ASS'Y	1	1	SNA	
15	DB61-02051A	HOLDER-PIPE	HIPS	1	1	SA	
16	DB67-00508A	CAP SCREW	HIPS	3	3	SA	

■ **Parts List(cont.)**

No.	Code No.	Description	Specification	Q'TY		SA/SNA	Remark
				AS09HPDN	AS12HPDN		
17	DB70-00514A	PLATE-HANGER	SGCC-M, T0.8	1	1	SA	
18	DB70-00515A	PLATE CONTACT	SUS 304	1	1	SA	
19	DB70-00516A	PLATE-CONTROL IN	SGCC-M	1	1	SNA	
20	DB93-01549B	ASS'Y-CONNECTOR POWER	ASS'Y	1	1	SA	
21	DB93-03016R	ASS'Y REMOCON	ARH-1315	1	1	SA	
22	DB92-00643F	ASS'Y GRILLE	ASS'Y	1	1	SA	
23	DB90-01829F	ASS'Y COVER DISPLAY	ASS'Y	1	1	SA	
23-1	DB63-01108A	COVER DISPLAY	PC	1	1	SNA	
23-2	DB64-01276A	INLAY DISPLAY	ACRYL	1	1	SNA	

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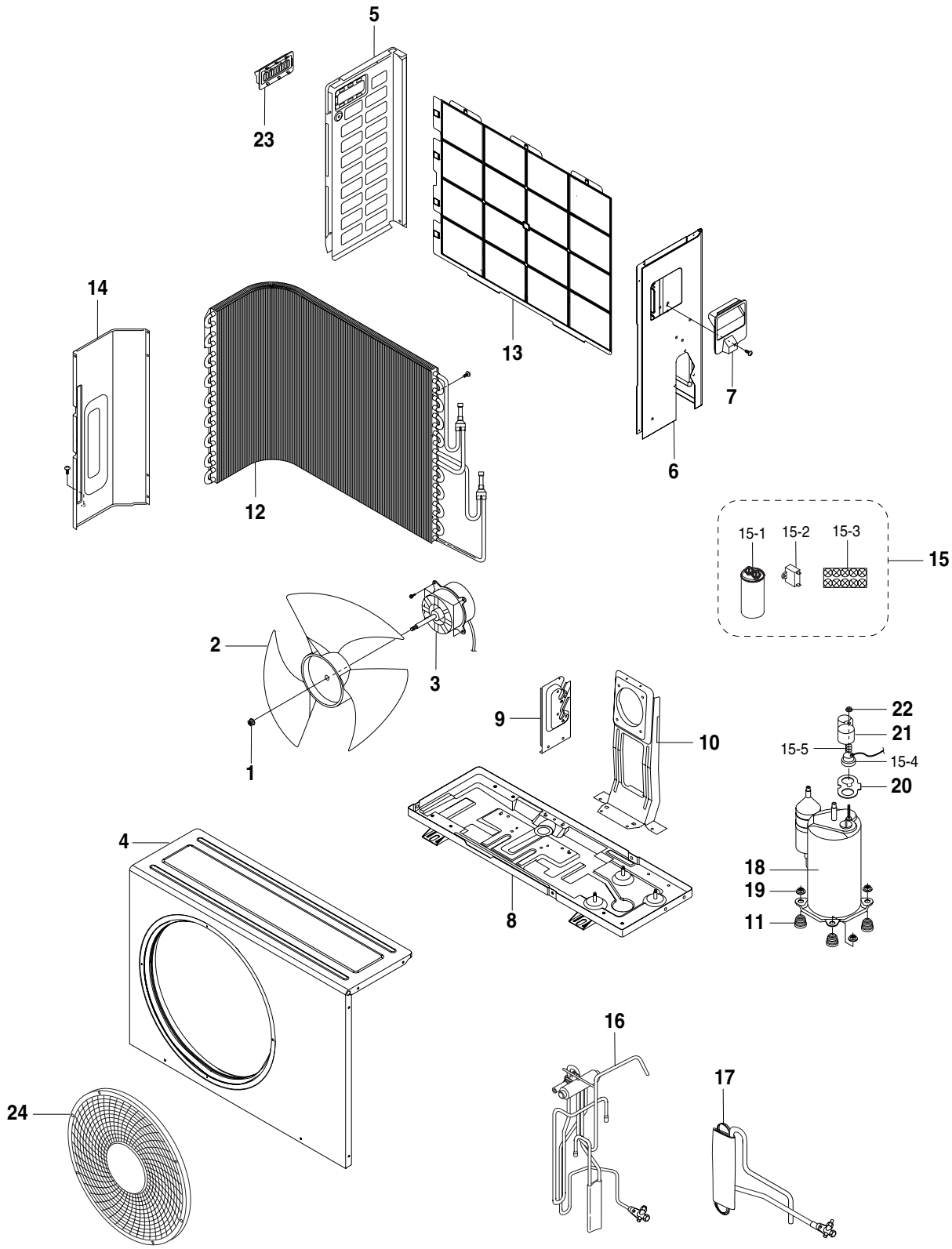
5-2 Outdoor Unit

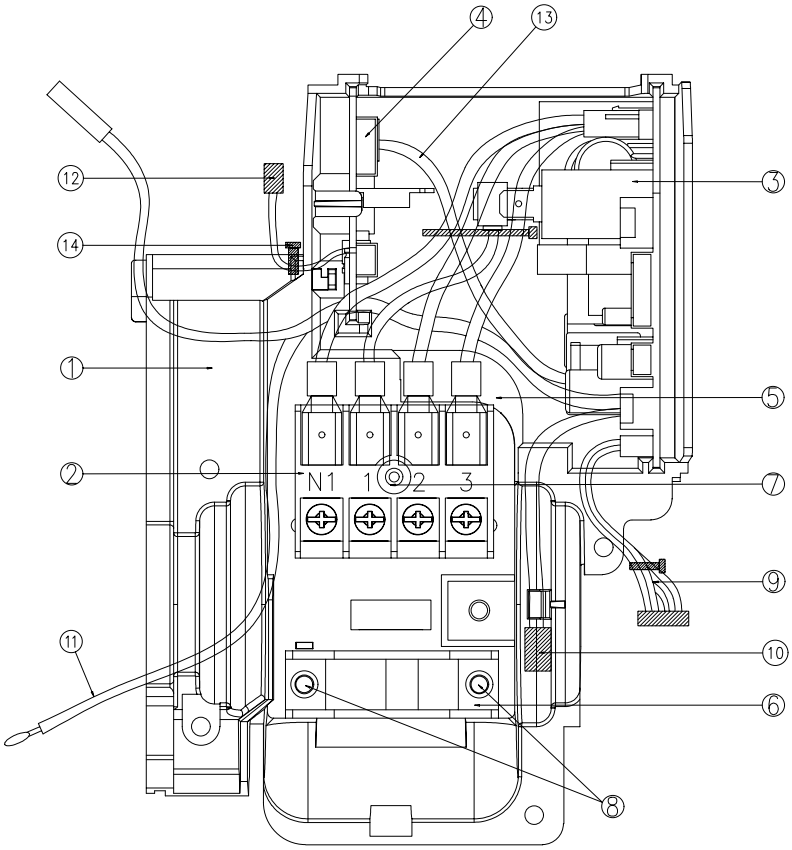


■ **Parts List**

No.	Code No.	Description	Specification	Q'TY		SA/SNA	Remark
				AS09HPCX AS09HPDX	AS12HPCX AS12HPDX		
1	DB60-30020A	NUT FLANGE	2C,M6,SM20C,NTR	1	1	SA	
2	DB67-50063A	FAN PROPELLER	AS+G/F 20%,ø405	1	1	SA	
3	DB31-10058C	MOTOR FAN OUT	220/240V,50/60Hz	1	1	SA	
4	DB90-01457D	ASS'Y CABINET FRONT	ASS'Y	1	1	SA	
5	DB64-00979B	CABINET SIDE LF	SECC-P	1	1	SA	
6	DB90-01432A	CABINET SIDE RH	SECC-P	1	1	SA	
7	DB63-10443C	COVERE PARTS ASS'Y	ASS'Y	1	1	SA	
8	DB90-01404D	ASS'Y BASE OUTDOOR	ASS'Y	1	1	SA	
9	DB61-01648A	BRACKET VALVE	GALVANIZED STEEL	1	1	SA	
10	DB61-01649A	BRACKET MOTOR	GALVANIZED STEEL	1	1	SA	
11	DB73-00070A	GROMMET-ISOLATOR	NR	3	3	SA	
12	DB96-04315G	ASS'Y COND	ASS'Y	1	-	SA	
	DB96-04317X	ASS'Y COND	ASS'Y	-	1	SA	
13	DB64-00998A	SCREEN COND	PP	1	1	SA	
14	DB94-00520D	ASS'Y PARTITION	ASS'Y	1	1	SA	
15	DB93-03843B	ASS'Y CONTROL OUT	ASS'Y	1	-	SA	
	DB93-03843A	ASS'Y CONTROL OUT	ASS'Y	-	1	SA	
15-1	2501-001238	CAPACITOR-COMP	40uF/450VAC	1	-	SA	
	2501-001239	CAPACITOR-COMP	45uF/450VAC	-	1	SA	
15-2	2301-001375	CAPACITOR-MOTOR	1.5uF/450VAC	1	1	SA	
15-3	DB65-00166A	TERMINAL BLOCK	4P	1	1	SA	
15-4	DB35-00028A	OLP	RBC12054-12500	1	-	SA	
	DB35-00028Z	OLP	RBC12127-12500	-	1	SA	
15-5	DB67-60020A	OLP SPRING	STS304	1	1	SA	
16	DB96-05285A	ASS'Y TUBE 4WAY VALVE	ASS'Y	-	1	SA	
	DB96-05286A	ASS'Y TUBE 4WAY VALVE	ASS'Y	1	-	SA	
17	DB96-03143D	ASS'Y TUBE CAPILLARY	ASS'Y	1	-	SA	
	DB96-05283A	ASS'Y TUBE CAPILLARY	ASS'Y	-	1	SA	
18	G4A091JU1EP	COMPRESSOR	G4A091	1	-	SA	
	G4B124JX2EL	COMPRESSOR	G4B124	-	1	SA	
19	DB60-30028A	NUT WASHER	HEX 2C M8 ZPC	3	3	SA	
20	DB63-20002A	GASKET	EPDM	1	1	SA	
21	DB63-10165D	COVER TERMINAL	PBT	1	1	SA	
22	DB60-30018A	NUT FLANGE	STEEL,M5	1	1	SA	
23	DB64-01003A	HANDLE CABINET LF	PP	1	1	SA	
24	DB63-00863A	GUARD FAN	PP	1	1	SA	

5-3 Ass'y Control In

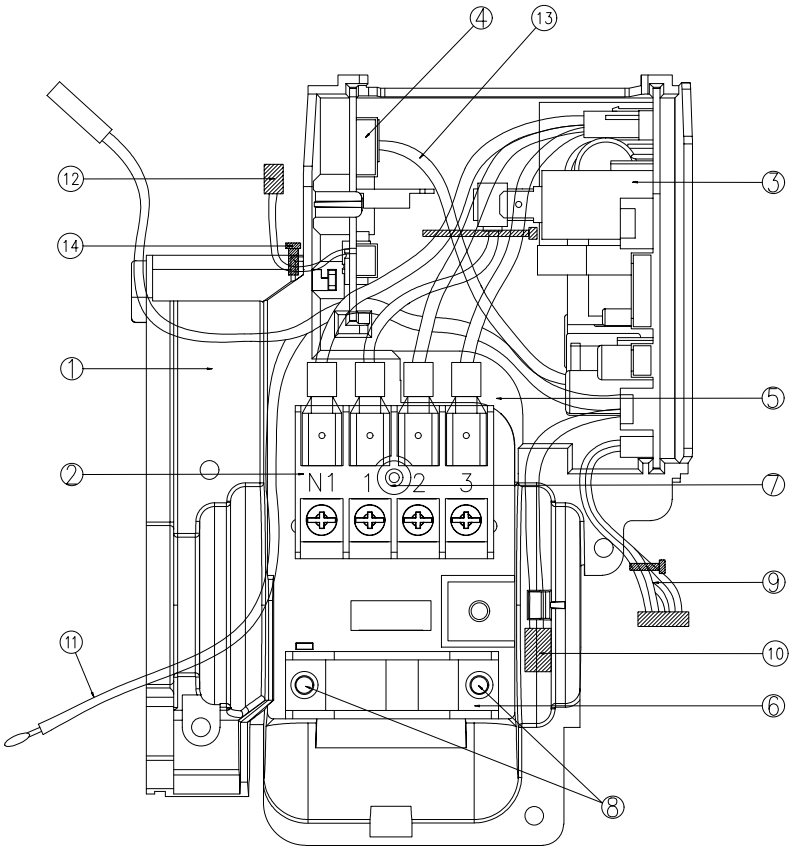
■ AS09HPCN/AS12HPCN : DB93-02804B



■ **Parts List**

No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
1	DB61-02054A	CASE-CONTROL	ABS	1	SNA	
2	DB93-03261C	ASS'Y-TERMINAL BLOCK	ASS'Y	1	SNA	
3	DB93-03373B	ASS'Y-MAIN PCB	ASS'Y	1	SA	
4	DB93-02809A	ASS'Y-MELODY PCB	ASS'Y	-	SA	
5	DB70-00516A	PLATE-TERMINAL LOW	SGCC-M,T1.2	1	SNA	
6	DB61-00171A	HOLDER-WIRE CLAMP	ABS	1	SA	
7	6001-000929	SCREW-MACHINE	PH M3xL22	1	SNA	
8	6001-001054	SCREW-MACHINE	TH M4xL10	2	SNA	
9	DB93-02827A	C/W MAIN TO DISPLAY	ASS'Y	1	SNA	
10	DB39-00643N	C/W STEP MOTOR UP/DOWN	ASS'Y	1	SNA	
11	DB32-00020K	ASS'Y THERMISTOR	4P(103AT)	1	SA	
12	DB93-02881A	C/W MELODY TO SPEAKER	ASS'Y	-	SNA	
13	DB93-02828A	C/W MELODY TO MAIN	ASS'Y	-	SNA	
14	DB65-10088D	CABLE TIE	100mm	-	SNA	

■ AS09HPDN/AS12HPDN : DB93-02804A



■ **Parts List**

No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
1	DB61-02054A	CASE-CONTROL	ABS	1	SNA	
2	DB93-03261C	ASS'Y-TERMINAL BLOCK	ASS'Y	1	SNA	
3	DB93-03373A	ASS'Y-MAIN PCB	ASS'Y	1	SA	
4	DB93-02809A	ASS'Y-MELODY PCB	ASS'Y	1	SA	
5	DB70-00516A	PLATE-TERMINAL LOW	SGCC-M,T1.2	1	SNA	
6	DB61-00171A	HOLDER-WIRE CLAMP	ABS	1	SA	
7	6001-000929	SCREW-MACHINE	PH M3xL22	1	SNA	
8	6001-001054	SCREW-MACHINE	TH M4xL10	2	SNA	
9	DB93-02827A	C/W MAIN TO DISPLAY	ASS'Y	1	SNA	
10	DB39-00643N	C/W STEP MOTOR UP/DOWN	ASS'Y	1	SNA	
11	DB32-00020K	ASS'Y THERMISTOR	4P(103AT)	1	SA	
12	DB93-02881A	C/W MELODY TO SPEAKER	ASS'Y	1	SNA	
13	DB93-02828A	C/W MELODY TO MAIN	ASS'Y	1	SNA	
14	DB65-10088D	CABLE TIE	100mm	1	SNA	

6. Electrical Parts List

■ MAIN PCB : DB93-03373B(AS09HPCN/AS12HPCN)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
BD71	0402-001298	DIODE-BRIDGE	DF06S,600V,1A,SMD-4,TP	1	SNA	
BZ61*	3002-001129	BUZZER-PIEZO	85DB,-,-,2KHz,-	1	SNA	
C101*	2401-003895	C-AL	15uF,20%,450V,GP,TP,12.5x20mm,5	1	SNA	
C102	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C103	2401-000151	C-AL	1000uF,20%,25V,GP,TP,10x20,5	1	SNA	
C104	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C105	2401-001363	C-AL	470uF,20%,16V,GP,TP,10x12.5,5	1	SNA	
C106	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C107	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,BK,12.5x6mm,10	1	SNA	
C108	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,BK,12.5x6mm,10	1	SNA	
C109*	2201-002193	C-CERAMIC,DISC	0.082nF,±10%,3000V,SL,-,8.5x3,5	1	SNA	
C201	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C202	2203-001562	C-CER,CHIP	10nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C203	2203-001562	C-CER,CHIP	10nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C204	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C301	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C302	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C401	2203-000444	C-CER,CHIP	1nF,10%,50V,X7R,2012	1	SNA	
C402	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C403	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C404	2203-001562	C-CER,CHIP	10nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C405	2203-000444	C-CER,CHIP	1nF,10%,50V,X7R,2012	1	SNA	
C501	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C502	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C503	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C504	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C601*	2401-002300	C-AL	47uF,20%,50V,GP,TP,6.3x11,5	1	SNA	
C901	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
CD11	0406-001086	DIODE-TVS	ST02D-200,185/200/215V,200W,DO-214	1	SNA	
CN43	3711-004379	CONNECTOR-HEADER	BOX,4P,1R,2mm,STRAIGHT,SN	1	SNA	
CN44	3711-000879	CONNECTOR-HEADER	BOX,3P,1R,2.5mm,STRAIGHT,SN	1	SNA	
CN61*	3711-004484	CONNECTOR-HEADER	BOX,5P,1R,2mm,STRAIGHT,SN	1	SNA	
CN71*	3711-000260	CONNECTOR-HEADER	1WALL,3P,1R,7.92mm,STRAIGHT,SN,BLU	1	SNA	
CN72	3711-000262	CONNECTOR-HEADER	1WALL,3P,1R,7.92mm,STRAIGHT,SN,W	1	SNA	
CN82*	3711-005206	CONNECTOR-HEADER	BOX,3P,1R,2mm,STRAIGHT,SN,BLU	1	SNA	
CN91*	3711-004352	CONNECTOR-HEADER	BOX,15P,1R,2mm,STRAIGHT,SN	1	SNA	
CR71*	2301-001251	C-FILM,LEAD-PPF	1.2uF,10%,450Vac,BK,38x18x30,3	1	SNA	
D101	0402-001194	DIODE-RECTIFIER	SHG2D,200V,2A,-,TP	1	SNA	
D701	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	1	SNA	
F701	3602-000147	FUSE-CLIP	250V,7.5A,30mohm	1	SNA	

■ MAIN PCB : DB93-03373B(AS09HPCN/AS12HPCN)(cont.)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
F701-1*	3601-000400	FUSE-CARTRIDGE	250V,2.5A,TIME-LAG,GLASS,5.2x20mm	1	SNA	
F702	3601-001209	FUSE-RADIAL LEAD	250V,1A,TIME-LAG,-,8.5x8mm	1	SNA	
FT71	DB27-00020A	COIL CHOKE	SSU10V-1500N,Interior SLIM,15.0mH,+50~	1	SNA	
IC01	1203-002545	IC-PWM CONTROLLER	266,DIP,8P,300MIL,PLASTIC	1	SNA	
IC02	1203-000429	IC-POSI.FIXED REG.	78L05A,TO-92,3P,-,PLASTIC	1	SNA	
IC04*	DB09-00296B	IC MICOM	S3C848AX28-QTRA,-,64P,+5V,10MHz,STM-0420	1	SNA	
IC05	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
IC06	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
IC07	1003-001462	IC-SOURCE DRIVER	TD62783AFW,SOL,18P,-,8,-500mA,TP	1	SNA	
IC09	1103-001175	IC-EEPROM	93LC56,128x16,SOP,8P,5x4mm,2.5/6.0V,-40	1	SNA	
NTC1	1404-001274	THERMISTOR-NTC	22ohm,1.4A,3100K,9.5mW/C,-,7.0,-	1	SNA	
PC01	0604-001038	PHOTO-COUPLER	TR,130-260%,200mW,DIP-4,ST	1	SNA	
PC02	0604-001003	PHOTO-COUPLER	TR,50-150%,200mW,DIP-4,ST	1	SNA	
PCB	DB41-00379A	PCB MAIN	PREMIUM,FR4,2,200502,1.6,90x120,-,2,MIAN,FUSEx2	1	SNA	
Q201	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA	
Q401	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA	
Q601*	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA	
Q602*	0501-002296	TR-SMALL SIGNAL	MMST2907A,PNP,200mW,SMT3,TP,100-3	1	SNA	
Q603*	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA	
R101	2007-000290	R-CHIP	100ohm,5%,1/8W,TP,2012	1	SNA	
R102	2007-000493	R-CHIP	2.2Kohm,5%,1/8W,TP,2012	1	SNA	
R103*	2002-001104	R-COMPOSITION	12Mohm,5%,1/2W,AA,TP,3.4x9mm	1	SNA	
R104*	2002-001104	R-COMPOSITION	12Mohm,5%,1/2W,AA,TP,3.4x9mm	1	SNA	
R105	2007-000931	R-CHIP	470ohm,5%,1/8W,TP,2012	1	SNA	
R201	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R202	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R203	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R204	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R205	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R206	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R207	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R208	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R209	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	SNA	
R210	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R211	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R212	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R301	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R302	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R401	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R402	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	

■ MAIN PCB : DB93-03373B(AS09HPCN/AS12HPCN)(cont.)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
R403	2007-001071	R-CHIP	6.8Kohm,5%,1/8W,TP,2012	1	SNA	
R404	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R405	2007-000766	R-CHIP	330ohm,5%,1/8W,TP,2012	1	SNA	
R406	2007-000766	R-CHIP	330ohm,5%,1/8W,TP,2012	1	SNA	
R407	2007-001067	R-CHIP	6.8Kohm,1%,1/8W,TP,2012	1	SNA	
R408	2007-001067	R-CHIP	6.8Kohm,1%,1/8W,TP,2012	1	SNA	
R409	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R410	2007-000477	R-CHIP	1Mohm,5%,1/8W,TP,2012	1	SNA	
R501	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	SNA	
R502	2007-000477	R-CHIP	1Mohm,5%,1/8W,TP,2012	1	SNA	
R602*	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R604*	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R605*	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	SNA	
R606*	2007-000872	R-CHIP	4.7Kohm,5%,1/8W,TP,2012	1	SNA	
R607*	2007-000931	R-CHIP	470ohm,5%,1/8W,TP,2012	1	SNA	
R608*	2007-000931	R-CHIP	470ohm,5%,1/8W,TP,2012	1	SNA	
R609*	2007-000030	R-CHIP	560ohm,5%,1/8W,TP,2012	1	SNA	
R610*	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R611*	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R908	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	SNA	
R909	2007-000872	R-CHIP	4.7Kohm,5%,1/8W,TP,2012	1	SNA	
RY71	3501-001268	RELAY-POWER	12V,0.9W,25000mA,SPST,20mS,10mS	1	SNA	
RY72*	3501-001154	RELAY-MINIATURE	12VDC,200mW,3000mA,1FORmA,10mS,10	1	SNA	
RY73*	3501-001154	RELAY-MINIATURE	12VDC,200mW,3000mA,1FORmA,10mS,10	1	SNA	
SS71	3502-000115	SSR	12Vdc,-,2A,1mS,1mS	1	SNA	
ST11	DB26-00015A	TRANS SWITCHING	-,JT1916-09,-,310V,FERRITE,-,EI19	1	SNA	
VA71	1405-000154	VARISTOR	560V,2500A,17.5x7.5mm,TP	1	SNA	
X501	2802-001198	RESONATOR-CERAMIC	10MHz,0.5%,BK,8x3x5.5mm	1	SNA	
XC71*	2301-001220	C-FILM,LEAD-PPF	100nF,10%,275V,BK,18x6x12,15	1	SNA	
XC72	2301-001220	C-FILM,LEAD-PPF	100nF,10%,275V,BK,18x6x12,15	1	SNA	
ZD11	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350mW,SOT-23,TP	1	SNA	
ZD12	0403-001285	DIODE-ZENER	BZX84-C11,10.4-11.6V,350mW,SOT-23,TP	1	SNA	

■ MAIN PCB : DB93-03373A(AS09HPDN/AS12HPDN)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
BD71	0402-001298	DIODE-BRIDGE	DF06S,600V,1A,SMD-4,TP	1	SNA	
BZ61*	3002-001129	BUZZER-PIEZO	85DB,-,-,2KHz,-	1	SNA	
C101*	2401-003895	C-AL	15uF,20%,450V,GP,TP,12.5x20mm,5	1	SNA	
C102	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C103	2401-000151	C-AL	1000uF,20%,25V,GP,TP,10x20,5	1	SNA	
C104	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C105	2401-001363	C-AL	470uF,20%,16V,GP,TP,10x12.5,5	1	SNA	
C106	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C107	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,BK,12.5x6mm,10	1	SNA	
C108	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,BK,12.5x6mm,10	1	SNA	
C109*	2201-002193	C-CERAMIC,DISC	0.082nF,±10%,3000V,SL,-,8.5x3,5	1	SNA	
C201	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C202	2203-001562	C-CER,CHIP	10nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C203	2203-001562	C-CER,CHIP	10nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C204	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C301	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C302	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C401	2203-000444	C-CER,CHIP	1nF,10%,50V,X7R,2012	1	SNA	
C402	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C403	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C404	2203-001562	C-CER,CHIP	10nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C405	2203-000444	C-CER,CHIP	1nF,10%,50V,X7R,2012	1	SNA	
C501	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C502	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C503	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C504	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
C601*	2401-002300	C-AL	47uF,20%,50V,GP,TP,6.3x11,5	1	SNA	
C901	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	1	SNA	
CD11	0406-001086	DIODE-TVS	ST02D-200,185/200/215V,200W,DO-214	1	SNA	
CN43	3711-004379	CONNECTOR-HEADER	BOX,4P,1R,2mm,STRAIGHT,SN	1	SNA	
CN44	3711-000879	CONNECTOR-HEADER	BOX,3P,1R,2.5mm,STRAIGHT,SN	1	SNA	
CN61*	3711-004484	CONNECTOR-HEADER	BOX,5P,1R,2mm,STRAIGHT,SN	1	SNA	
CN71*	3711-000260	CONNECTOR-HEADER	1WALL,3P,1R,7.92mm,STRAIGHT,SN,BLU	1	SNA	
CN72	3711-000262	CONNECTOR-HEADER	1WALL,3P,1R,7.92mm,STRAIGHT,SN,W	1	SNA	
CN82*	3711-005206	CONNECTOR-HEADER	BOX,3P,1R,2mm,STRAIGHT,SN,BLU	1	SNA	
CN83*	3711-005378	CONNECTOR-HEADER	BOX,6P,1R,2mm,STRAIGHT,SN,BLUE	1	SNA	
CN91*	3711-004352	CONNECTOR-HEADER	BOX,15P,1R,2mm,STRAIGHT,SN	1	SNA	
CR71*	2301-001251	C-FILM,LEAD-PPF	1.2uF,10%,450Vac,BK,38x18x30,3	1	SNA	
D101	0402-001194	DIODE-RECTIFIER	SHG2D,200V,2A,-,TP	1	SNA	
D701	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	1	SNA	

■ MAIN PCB : DB93-03373A(AS09HPDN/AS12HPDN)(cont.)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
F701	3602-000147	FUSE-CLIP	250V,7.5A,30mohm	1	SNA	
F701-1*	3601-000400	FUSE-CARTRIDGE	250V,2.5A,TIME-LAG,GLASS,5.2x20mm	1	SNA	
F702	3601-001209	FUSE-RADIAL LEAD	250V,1A,TIME-LAG,-,8.5x8mm	1	SNA	
FT71	DB27-00020A	COIL CHOKE	SSU10V-1500N,Interior SLIM,15.0mH,+50~	1	SNA	
IC01	1203-002545	IC-PWM CONTROLLER	266,DIP,8P,300MIL,PLASTIC	1	SNA	
IC02	1203-000429	IC-POSI.FIXED REG.	78L05A,TO-92,3P,-,PLASTIC	1	SNA	
IC04*	DB09-00296B	IC MICOM	S3C848AX28-QTRA,-,64P,+5V,10MHz,STM-0420	1	SNA	
IC05	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
IC06	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
IC07	1003-001462	IC-SOURCE DRIVER	TD62783AFW,SOL,18P,-,8,-500mA,TP	1	SNA	
IC09	1103-001175	IC-EEPROM	93LC56,128x16,SOP,8P,5x4mm,2.5/6.0V,-40	1	SNA	
NTC1	1404-001274	THERMISTOR-NTC	22ohm,1.4A,3100K,9.5mW/C,-,7.0,-	1	SNA	
PC01	0604-001038	PHOTO-COUPLER	TR,130-260%,200mW,DIP-4,ST	1	SNA	
PC02	0604-001003	PHOTO-COUPLER	TR,50-150%,200mW,DIP-4,ST	1	SNA	
PCB	DB41-00379A	PCB MAIN	PREMIUM,FR4,2,200502,1.6,90x120,-,2,MIAN,FUSEx2	1	SNA	
Q201	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA	
Q401	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA	
Q601*	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA	
Q602*	0501-002296	TR-SMALL SIGNAL	MMST2907A,PNP,200mW,SMT3,TP,100-3	1	SNA	
Q603*	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA	
R101	2007-000290	R-CHIP	100ohm,5%,1/8W,TP,2012	1	SNA	
R102	2007-000493	R-CHIP	2.2Kohm,5%,1/8W,TP,2012	1	SNA	
R103*	2002-001104	R-COMPOSITION	12Mohm,5%,1/2W,AA,TP,3.4x9mm	1	SNA	
R104*	2002-001104	R-COMPOSITION	12Mohm,5%,1/2W,AA,TP,3.4x9mm	1	SNA	
R105	2007-000931	R-CHIP	470ohm,5%,1/8W,TP,2012	1	SNA	
R201	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R202	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R203	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R204	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R205	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R206	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R207	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R208	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R209	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	SNA	
R210	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R211	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R212	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R301	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R302	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R401	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	

■ MAIN PCB : DB93-03373A(AS09HPDN/AS12HPDN)(cont.)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
R402	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R403	2007-001071	R-CHIP	6.8Kohm,5%,1/8W,TP,2012	1	SNA	
R404	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R405	2007-000766	R-CHIP	330ohm,5%,1/8W,TP,2012	1	SNA	
R406	2007-000766	R-CHIP	330ohm,5%,1/8W,TP,2012	1	SNA	
R407	2007-001067	R-CHIP	6.8Kohm,1%,1/8W,TP,2012	1	SNA	
R408	2007-001067	R-CHIP	6.8Kohm,1%,1/8W,TP,2012	1	SNA	
R409	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R410	2007-000477	R-CHIP	1Mohm,5%,1/8W,TP,2012	1	SNA	
R501	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	SNA	
R502	2007-000477	R-CHIP	1Mohm,5%,1/8W,TP,2012	1	SNA	
R602*	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R604*	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R605*	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	SNA	
R606*	2007-000872	R-CHIP	4.7Kohm,5%,1/8W,TP,2012	1	SNA	
R607*	2007-000931	R-CHIP	470ohm,5%,1/8W,TP,2012	1	SNA	
R608*	2007-000931	R-CHIP	470ohm,5%,1/8W,TP,2012	1	SNA	
R609*	2007-000030	R-CHIP	560ohm,5%,1/8W,TP,2012	1	SNA	
R610*	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R611*	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	1	SNA	
R908	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	SNA	
R909	2007-000872	R-CHIP	4.7Kohm,5%,1/8W,TP,2012	1	SNA	
RY71	3501-001268	RELAY-POWER	12V,0.9W,25000mA,SPST,20mS,10mS	1	SNA	
RY72*	3501-001154	RELAY-MINIATURE	12VDC,200mW,3000mA,1FORmA,10mS,10	1	SNA	
RY73*	3501-001154	RELAY-MINIATURE	12VDC,200mW,3000mA,1FORmA,10mS,10	1	SNA	
SS71	3502-000115	SSR	12Vdc,-,2A,1mS,1mS	1	SNA	
ST11	DB26-00015A	TRANS SWITCHING	-,JT1916-09,-,310V,FERRITE,-,EI19	1	SNA	
VA71	1405-000154	VARISTOR	560V,2500A,17.5x7.5mm,TP	1	SNA	
X501	2802-001198	RESONATOR-CERAMIC	10MHz,0.5%,BK,8x3x5.5mm	1	SNA	
XC71*	2301-001220	C-FILM,LEAD-PPF	100nF,10%,275V,BK,18x6x12,15	1	SNA	
XC72	2301-001220	C-FILM,LEAD-PPF	100nF,10%,275V,BK,18x6x12,15	1	SNA	
ZD11	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350mW,SOT-23,TP	1	SNA	
ZD12	0403-001285	DIODE-ZENER	BZX84-C11,10.4-11.6V,350mW,SOT-23,TP	1	SNA	

■ MELODY PCB : DB93-02809A(AS09HPDN/AS12HPDN)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
C801	2202-000780	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,3.5x1	1	SNA	
C802	2401-001907	C-AL	10uF,20%,16V,BP,TP,5x11mm,5mm	1	SNA	
C803	2202-000780	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,3.5x1	1	SNA	
C804	2202-000780	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,3.5x1	1	SNA	
C805	2401-000832	C-AL	220uF,20%,25V,GP,TP,8x11.5,5	1	SNA	
C806	2202-000780	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,3.5x1	1	SNA	
C807	2202-000128	C-CERAMIC,MLC-AXIAL	10nF,+80-20%,50V,Y5V,TP,2.5x4.	1	SNA	
C808	2401-000832	C-AL	220uF,20%,25V,GP,TP,8x11.5,5	1	SNA	
C809	2202-000780	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,3.5x1	1	SNA	
CN85	3711-003874	CONNECTOR-HEADER	BOX,6P,1R,2mm,ANGLE,SN	1	SNA	
CN86	3711-004386	CONNECTOR-HEADER	BOX,3P,1R,2mm,ANGLE,SN	1	SNA	
IC06	1204-002088	IC-SPEECH SYNTHESIZE	MLC1043D,DIP,24P,300MIL,PLASTICS	1	SNA	
IC07	1201-000416	IC-AUDIO AMP	386,DIP,8P,300MIL,SINGLE,26V/m	1	SNA	
IC08	1203-000274	IC-POSI.FIXED REG.	7805,TO-220,3P,-,PLASTIC,4.8/5	1	SNA	
R801	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8x3.2mm	1	SNA	
R802	2001-000786	R-CARBON	47KOHM,5%,1/8W,AA,TP,1.8x3.2mm	1	SNA	
R803	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8x3.2mm	1	SNA	
R804	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8x3.2mm	1	SNA	
R805	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8x3.2mm	1	SNA	
R806	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8x3.2mm	1	SNA	
R807	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8x3.2mm	1	SNA	

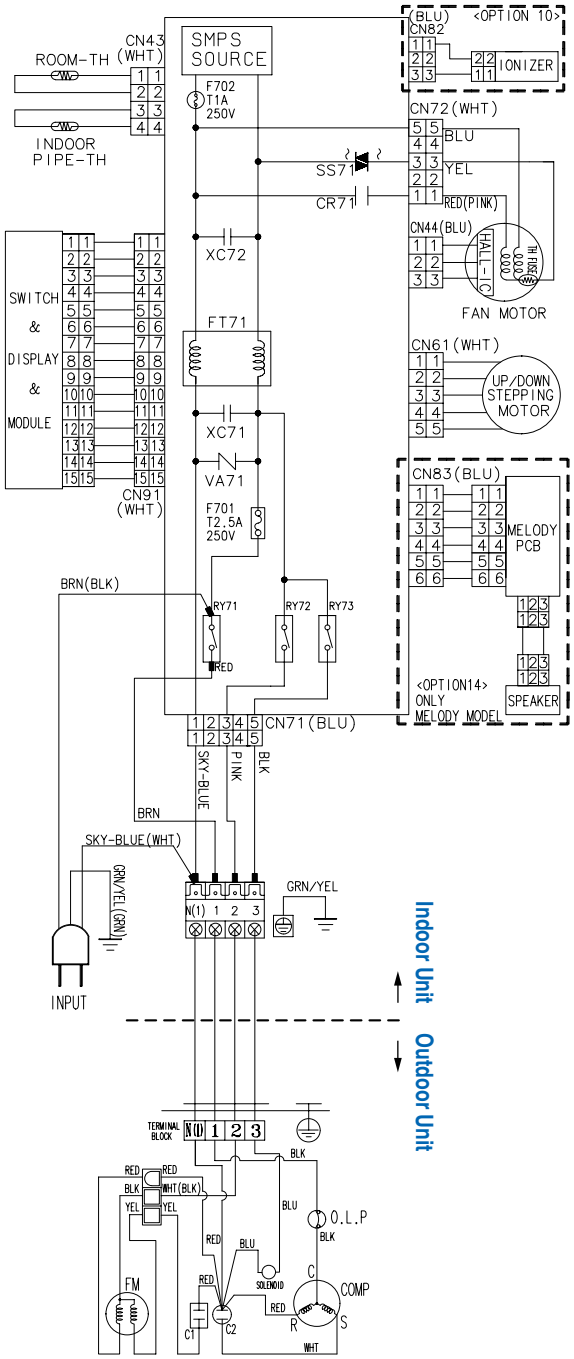
■ DISPLAY PCB : DB93-02806A

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
1	DB93-03138A	ASS'Y DISPLAY REFLECTOR		1	SNA	
2	DB41-00321A	PCB-DISPLAY	FR-4 T1.6	1	SNA	
3	3404-000176	TACT SWITCH	KPT-1105A	1	SNA	
4	2003-002111	RESISTOR	200ohm, 2W	4	SNA	
5	-	CONNECTOR WIRE	3P	1	SNA	
6	3711-004352	CONNECTOR	SMW200-15P	1	SNA	

■ MODULE PCB : DB93-01369A

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
1	DB41-00102A	PCB MODULE	FR1 T1.6	1	SNA	
2	3711-004386	CONNECTOR-HEADER	BOX, 3P, 1R, 2mm, ANGLE, SN	1	SNA	
3	2202-000173	C-CERAMIC, MLC-AXIAL	1nF, 10%, 50V, Y5P, TP, 1.9 x 3.5, -	1	SNA	
4	0401-000005	DIODE-SWITCHING	1N4148, 100V, 200mA, DO-35, TP	1	SNA	
5	2202-000780	C-CERAMIC, MLC-AXIAL	100nF, +80-20%, 50V, Y5V, TP, 3.5 x 1	1	SNA	
6	6909-001204	MODULE	346HF12N	1	SA	

7. Wiring Diagram



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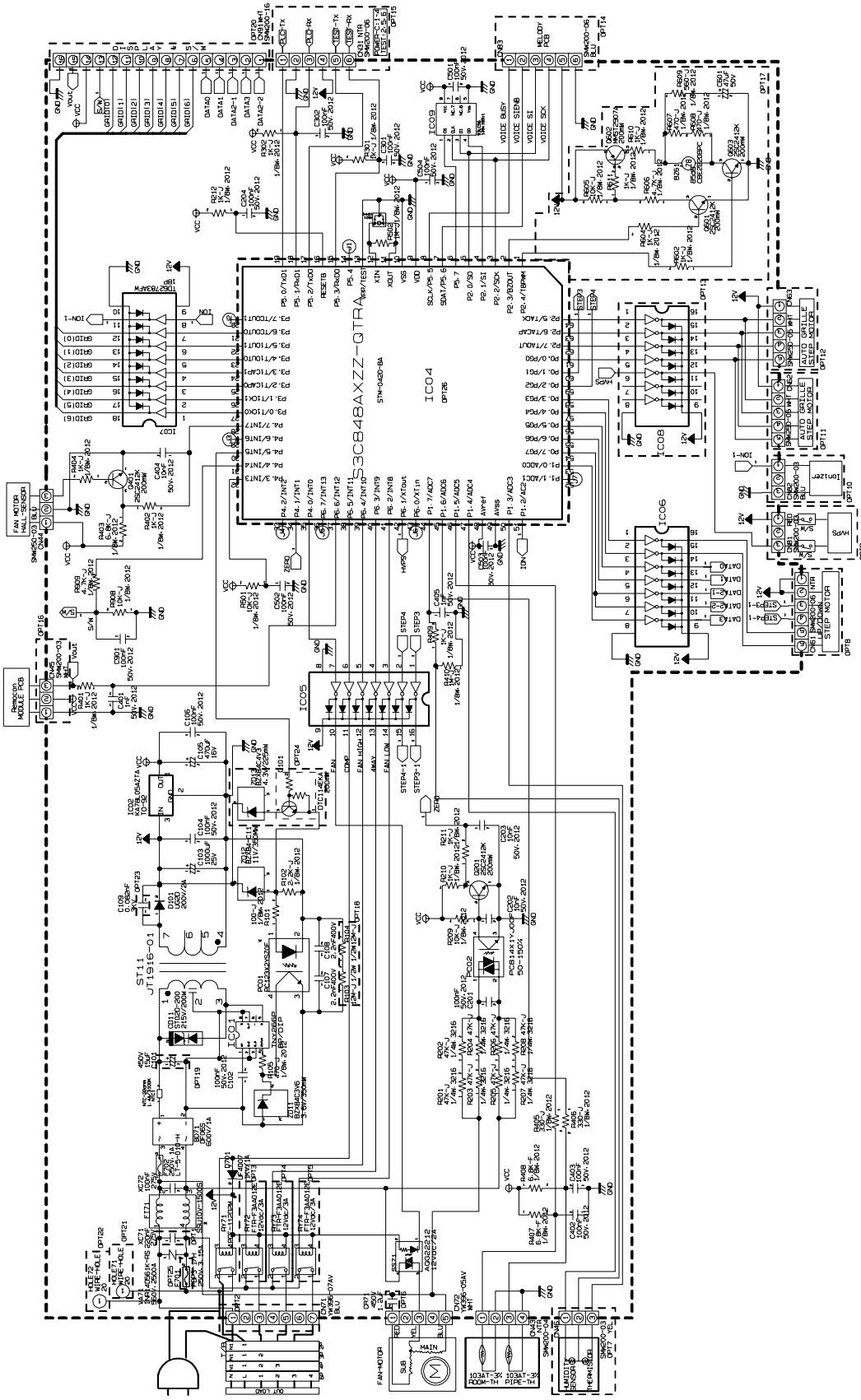
8. Schematic Diagram



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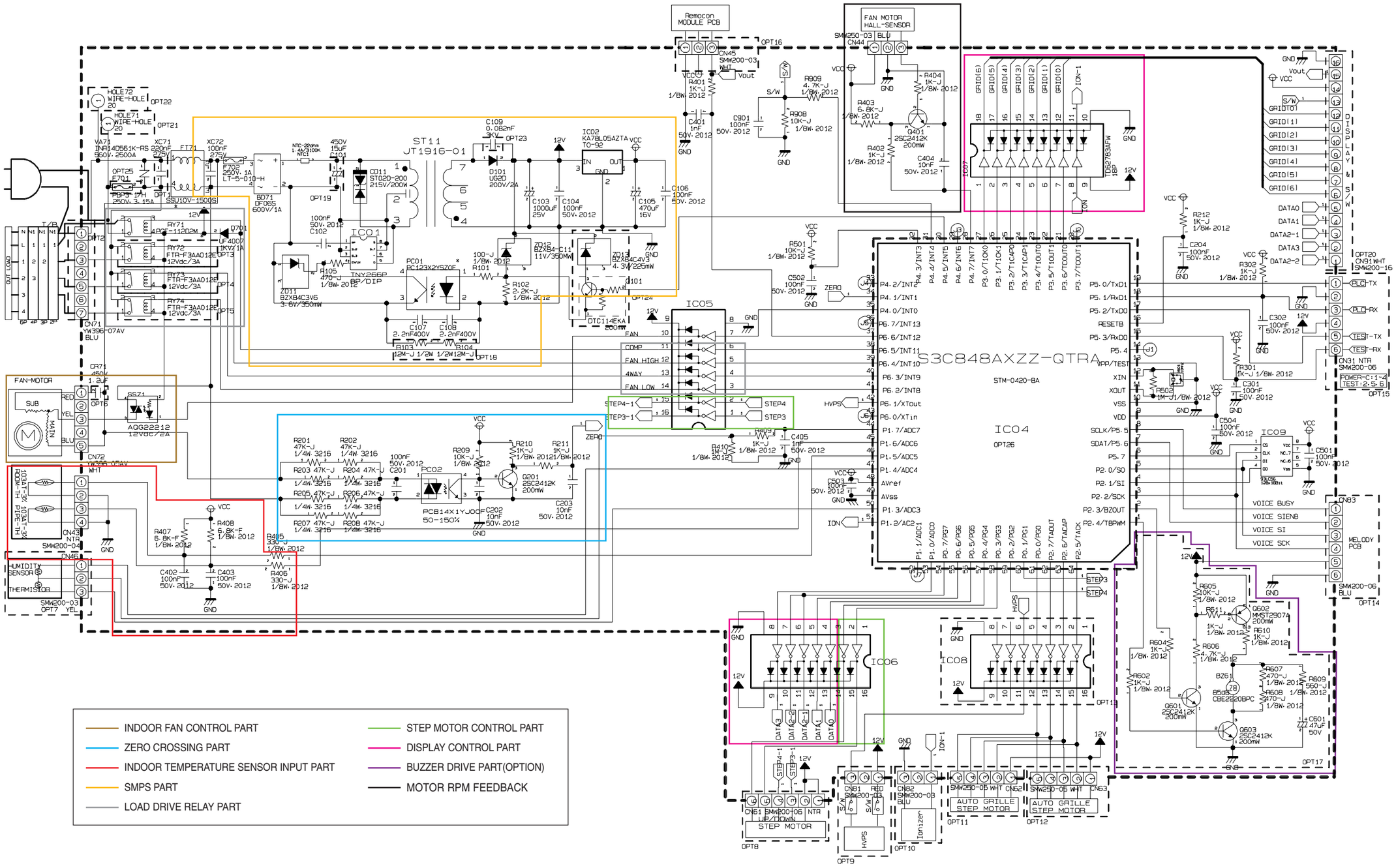
9. Circuit Descriptions

9-1 PCB Circuit Descriptions



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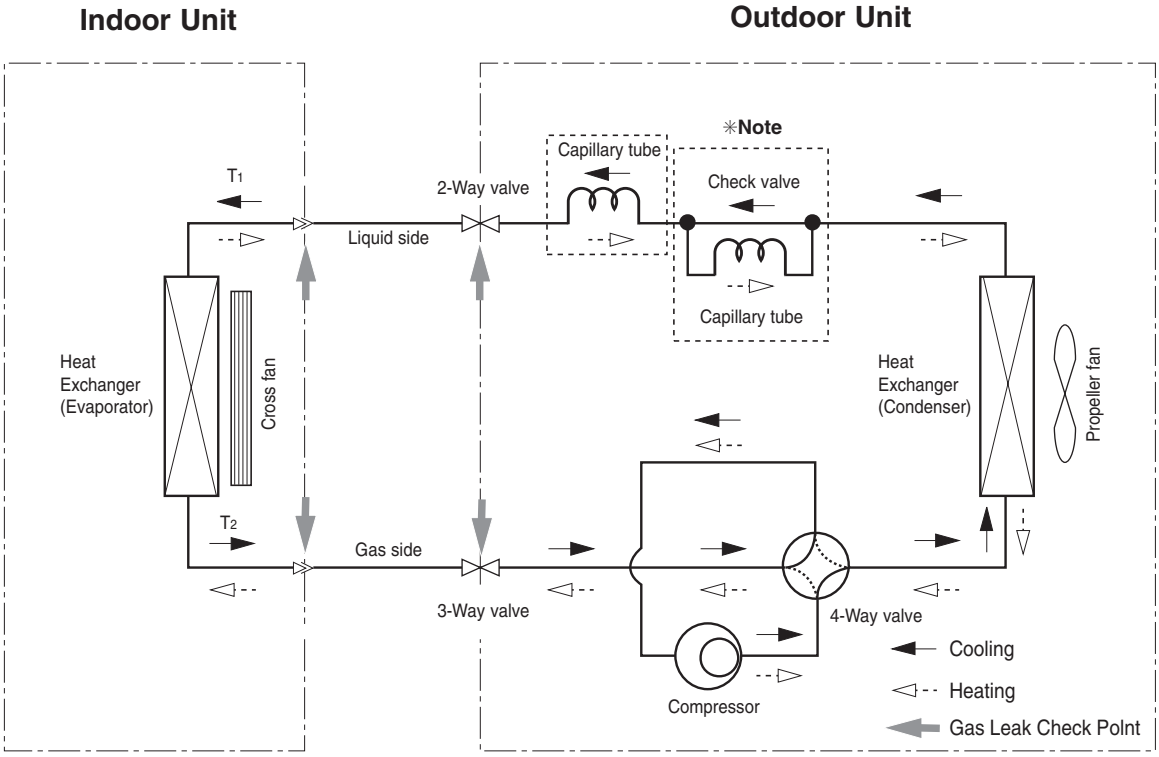
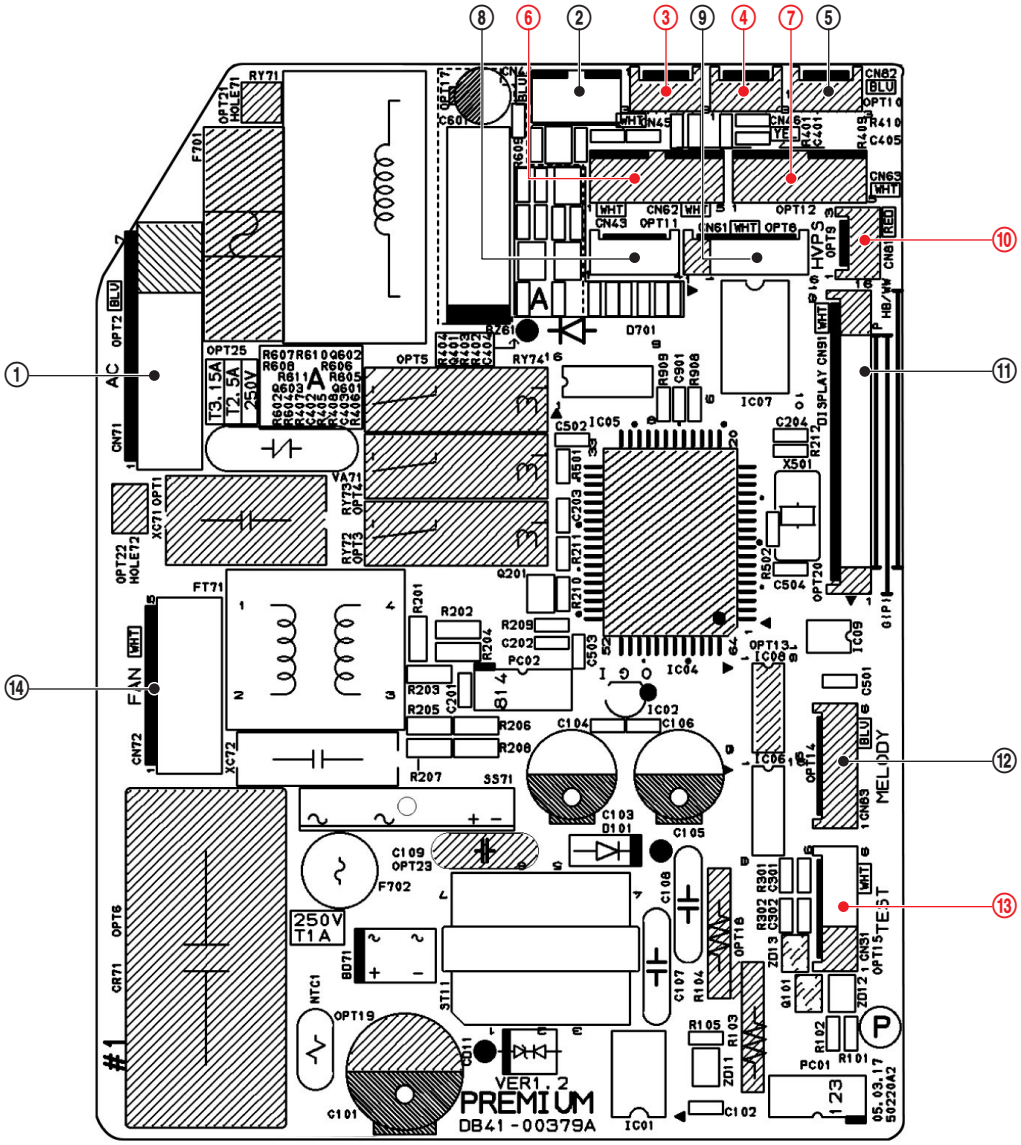
9-2 Refrigerating Cycle Diagram



10. PCB Diagram



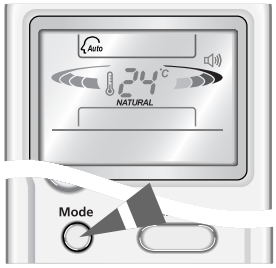
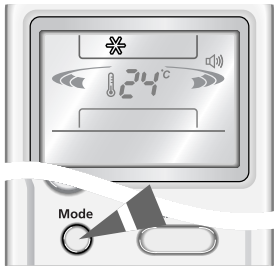
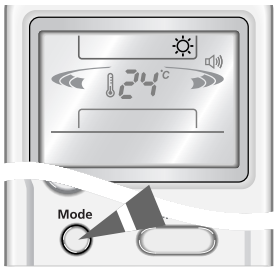
⚠ The red number connecter is not used.

①	Power	⑧	Temperature Sensor
②	Motor RPM Feedback	⑨	BLADE-H Step Motor
③	Remocon Module	⑩	HVPS(High voltage Generator)
④	Humidity Sensor	⑪	DISPLAY PCB Connection
⑤	Anions	⑫	Melody PCB Connection
⑥	Auto grill 1	⑬	Test Board Connection
⑦	Auto grill 2	⑭	Indoor Fan Motor

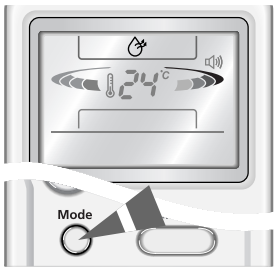
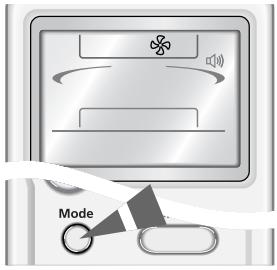
11. Operating Instruction and Installation

11-1 Main Function

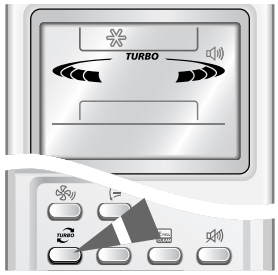
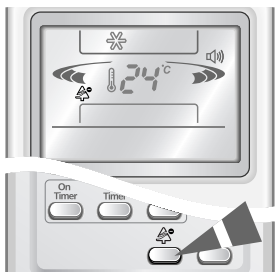
11-1-1 Basic Function

Mode	Explanation	Remark
Auto Mode	Press the Mode button on the remote control until Auto is displayed.	
Cool Mode	Press the Mode button on the remote control until ❄ is displayed.	
	Press the button to select the fan speed until the required setting is displayed. Automatic (rotated : → → → →) Low Medium High	
Heat Mode	Press the Mode button on the remote control until ☼ is displayed.	
	Press the button to select the fan speed until the required setting is displayed. Automatic (rotated : → → → →) Low Medium High	

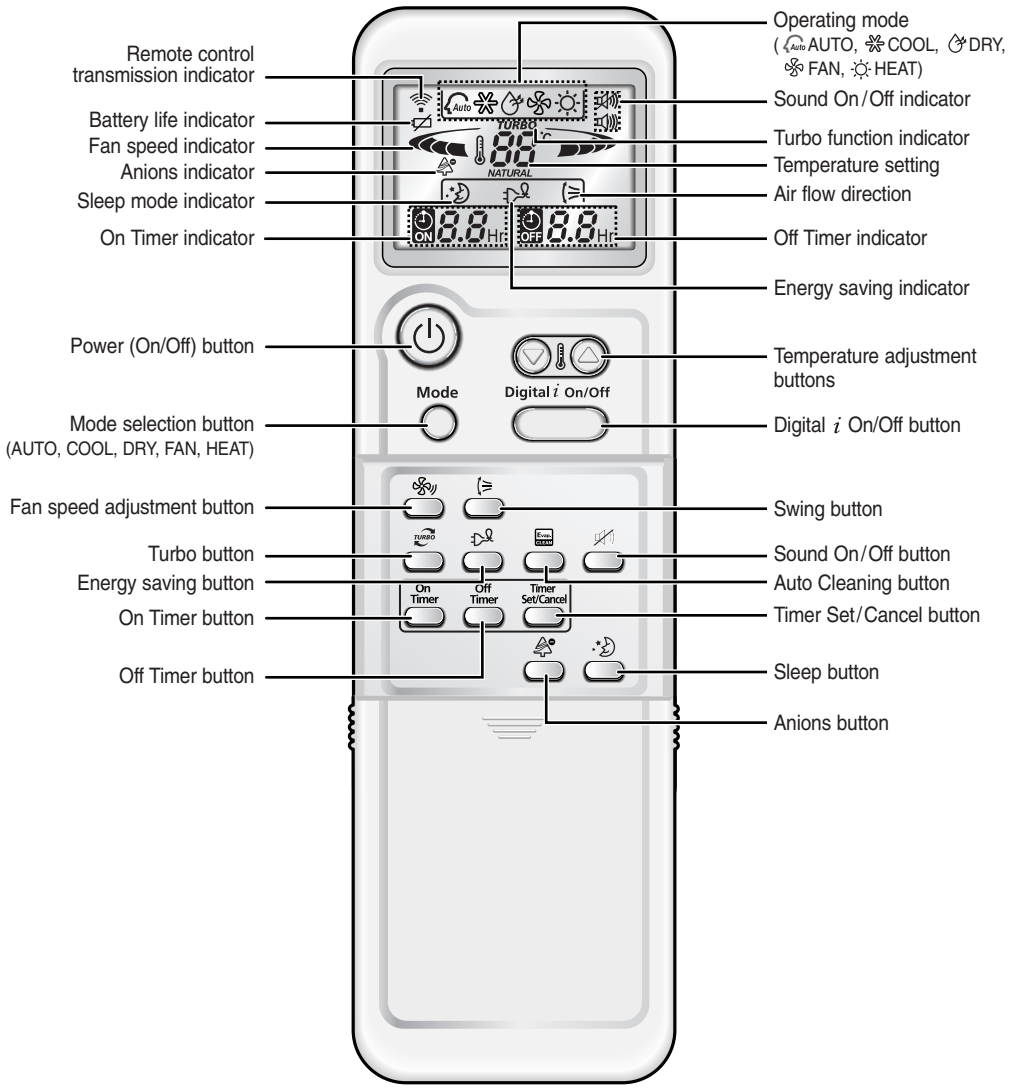
Basic Function(cont.)

Mode	Explanation	Remark
Dry Mode	Press the Mode button on the remote control until is displayed.	
Fan Mode	Press the Mode button on the remote control until is displayed.	

11-1-2 Applied Function

<table>
<tr><th>Mode</th><th>Explanation</th><th>Remark</th></tr>
<tr><td>Turbo Function</td><td>Press the button.
• After 30 minutes, the air conditioner is reset automatically to the previous setting.
• You can select the Turbo function in the Auto, Cool and Heat mode. If you select this function in the Dry or Fan mode, the mode changes to the Auto mode.</td><td>  </td></tr>
<tr><td>Energy Saving Function</td><td>Press the button.</td><td> </td></tr>
<tr><td>Auto Cleaning Function</td><td>Press the button.
<table><tr><th>When the air conditioner is turned</th><th>Mode</th><th>Operating time</th></tr><tr><td rowspan="2">On</td><td>Auto, Cool, Dry</td><td>30 minutes</td></tr><tr><td>Heat, Fan</td><td>15 minutes</td></tr><tr><td>Off</td><td></td><td>30 minutes</td></tr></table>✳ There is no extra mark on the remote control, LED is on at the main body display. Press the button one more time for cancel.</td><td> </td></tr>
<tr><td>Sound On/Off Function</td><td>Press the button to turn off the sound.</td><td> </td></tr>
<tr><td>Anions Function</td><td>Press the button.
• If you press the button when the air conditioner is off, the air conditioner turns on automatically and generates anions in the Fan mode with Low fan speed.</td><td>  </td></tr>
</table>

11-2 Wireless Remote Control-Buttons and Display



12. Troubleshooting

12-1 Items to be checked first

1. The input voltage should be rating voltage ±10% range.
   The air conditioner may not operate properly if the voltage is out of this range.

2. Is the link cable linking the indoor unit and the outdoor unit linked properly?
   The indoor unit and the outdoor unit shall be linked by 5 cables.
   Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.
   Otherwise the air conditioner may not operate properly.

3. When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the air conditioner.

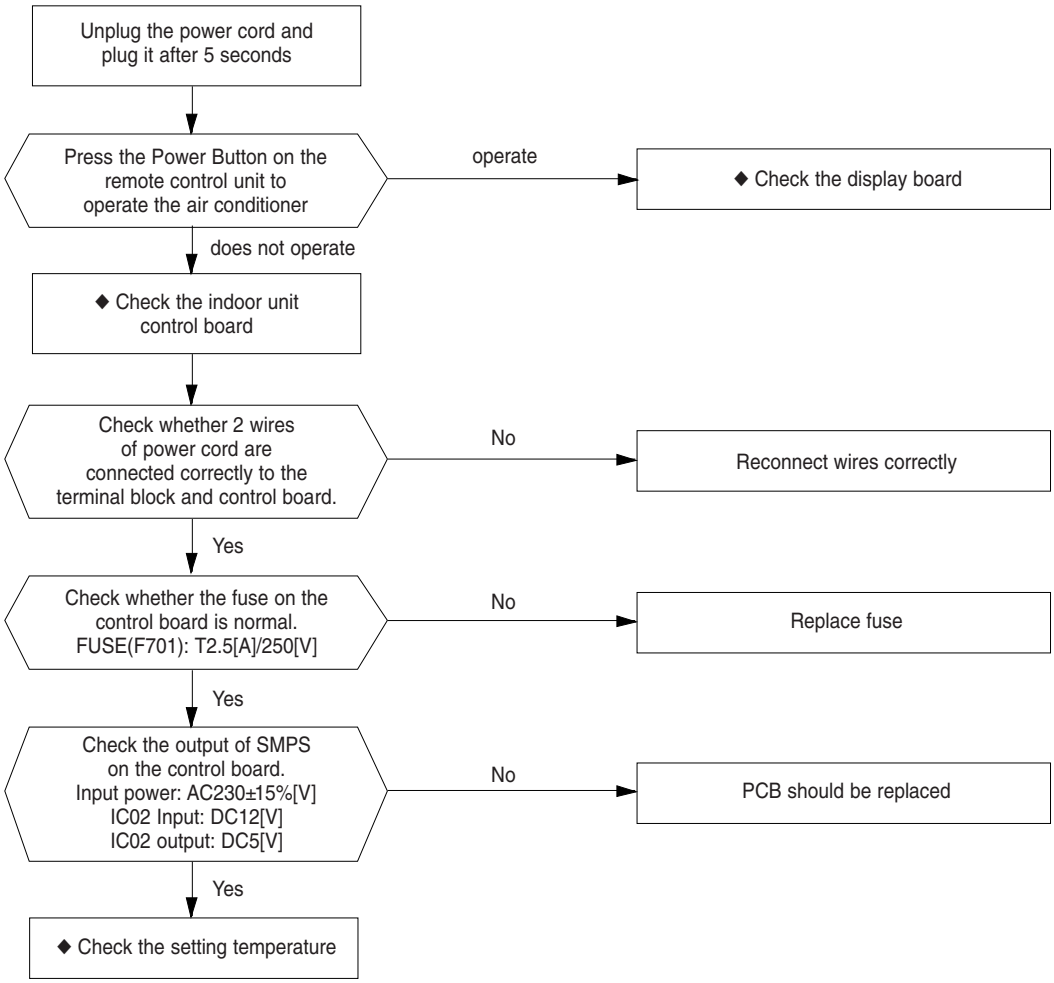
No	Operation of air conditioner	Explanation
1	The OPERATION indication LED(BLUE) blinks when a power plug of the indoor unit is plugged in for the first time.	It indicates power is on. The LED stops blinking if the operation ON/OFF button on the remote control unit is pushed.
2	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the INDOOR FAN should operate. **[In case of heat pump model]** In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew.
3	Fan speed setting is not allowed in DRY( ) mode.	The speed of the indoor fan is set to LL in DRY mode. Fan speed is selected automatically in AUTO mode.
4	Compressor stops operation intermittently in DRY( ) mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
5	Timer LED(ORANGE) of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.
7	**[In case of heat pump model]** Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.	When the unit is turned off while de-ice is activated, the compressor continues operation for up to 9 minutes (maximum) until the deice is completed.
8	**[In case of heat pump model]** The compressor and indoor fan stop intermittently in HEAT mode.	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
9	**[In case of heat pump model]** Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation

12-2 Fault Diagnosis by Symptom

12-2-1 No Power (completely dead)-Initial diagnosis

1. Checklist :
   1) Is input voltage normal?
   2) Is AC power linked correctly?
   3) Is input voltage of DC regulator IC KA7805 (IC02) normal? (11VDC-12.5VDC)
   4) Is output voltage of DC regulator IC KA7805 (IC02) normal? (4.5VDC-5.5VDC)

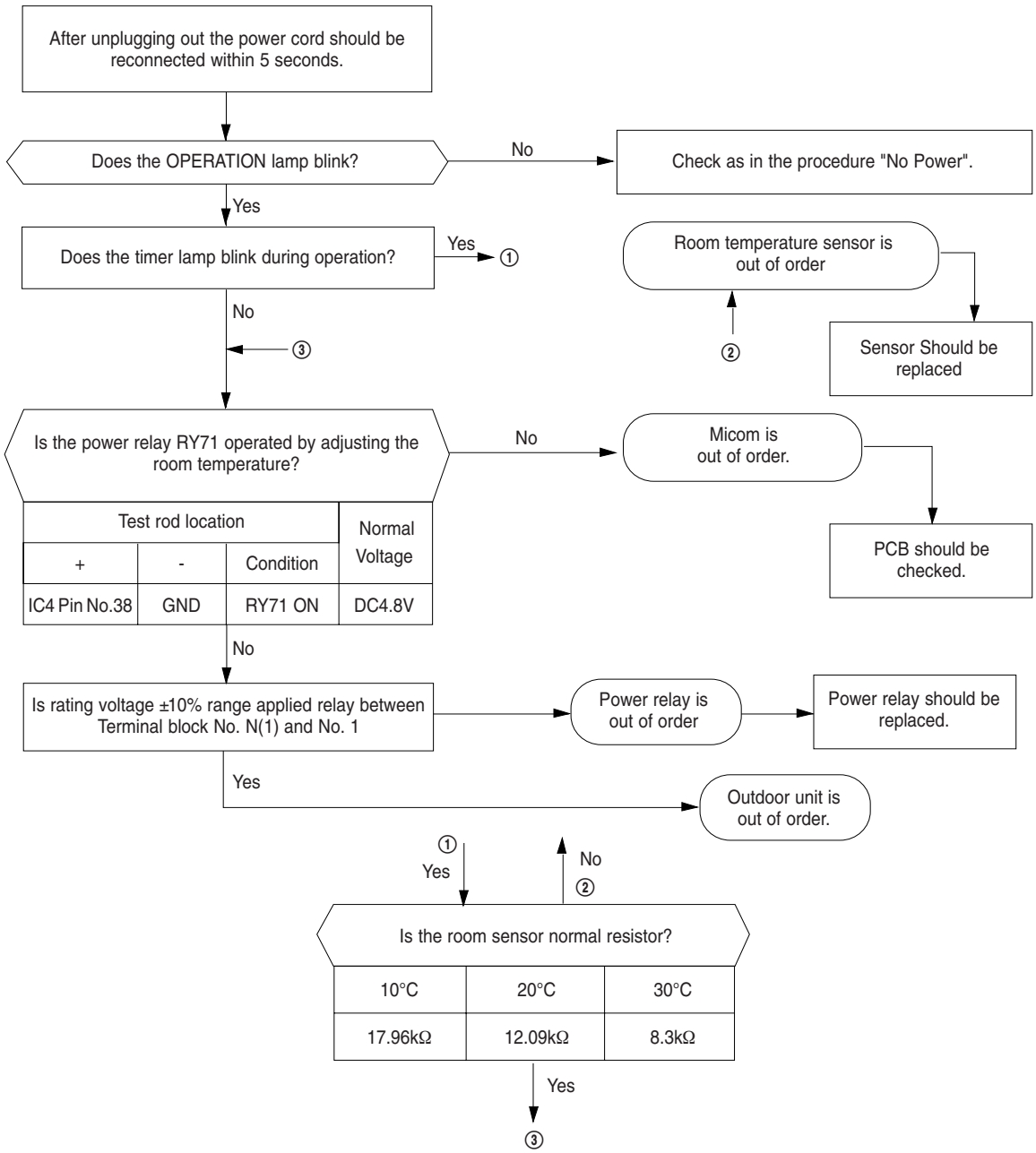
2. Troubleshooting procedure


Unplug the power cord and plug it after 5 seconds
Press the Power Button on the remote control unit to operate the air conditioner
operate
◆ Check the display board
does not operate
◆ Check the indoor unit control board
Check whether 2 wires of power cord are connected correctly to the terminal block and control board.
No
Reconnect wires correctly
Yes
Check whether the fuse on the control board is normal. FUSE(F701): T2.5[A]/250[V]
No
Replace fuse
Yes
Check the output of SMPS on the control board. Input power: AC230±15%[V] IC02 Input: DC12[V] IC02 output: DC5[V]
No
PCB should be replaced
Yes
◆ Check the setting temperature

12-2-2 When the Outdoor Unit Does Not Operate. (Initial Diagnosis)

1. Checklist :
   1) Is input voltage normal?
   2) Is the set temperature of the remote control higher than room temperature in COOL mode?
   3) Is the set temperature of the remote control lower than room temperature in HEAT mode?
   4) Is the POWER IN connector (CN71) linked correctly?
   5) Is the outdoor unit properly connected with the TERMINAL BLOCK connector(N(1), 1, 2, 3)?

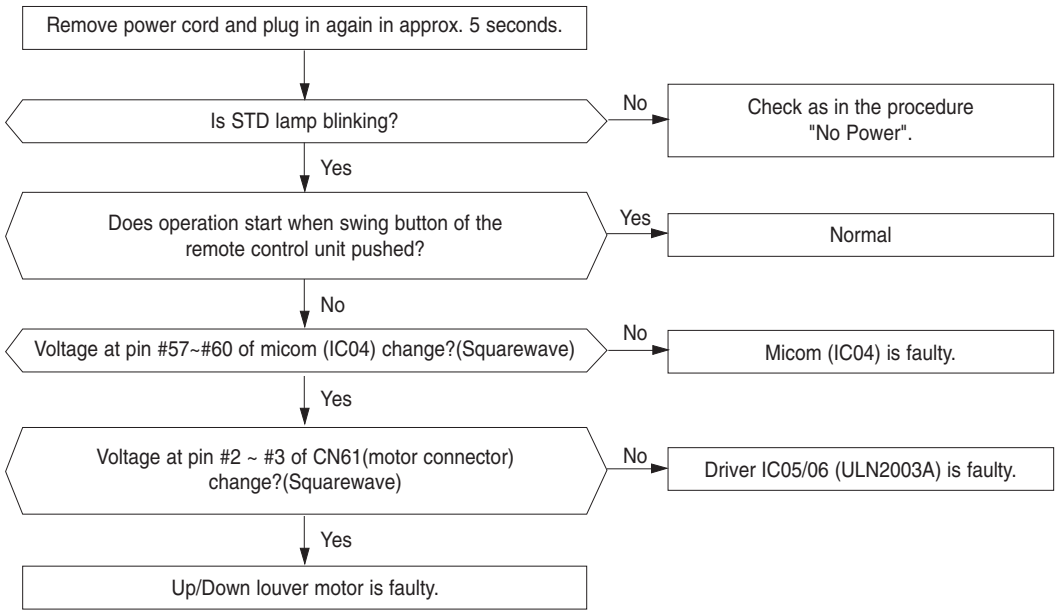
2. Troubleshooting procedure



12-2-3 When the Up/Down Louver Motor Does Not Operate. (Initial Diagnosis)

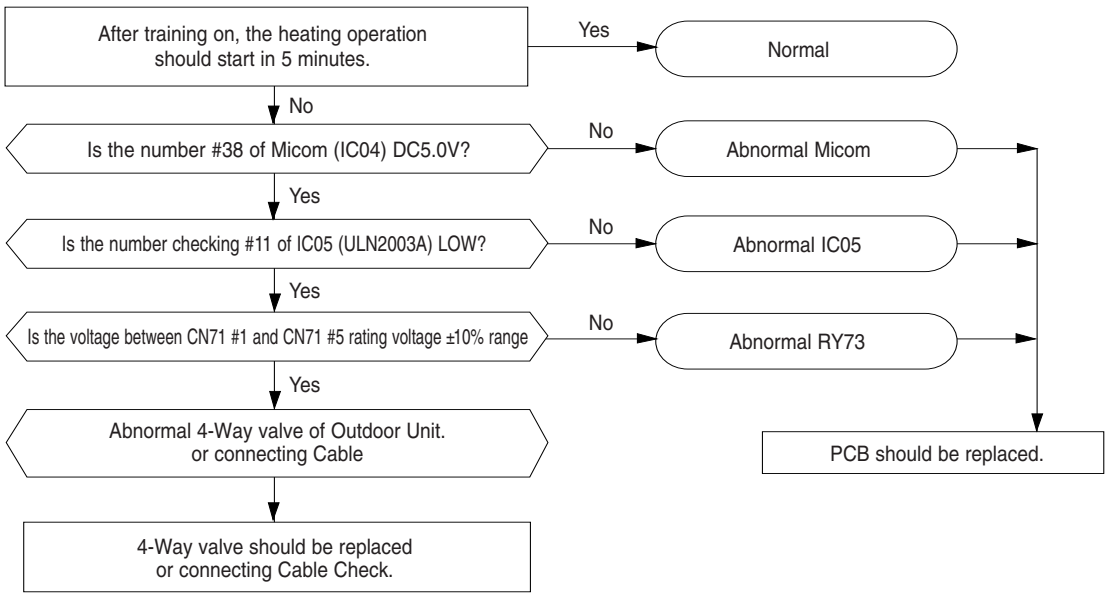
1. Checklist :
   1) Is input voltage normal?
   2) Is the Up/Down louver motor properly connected with the connector (CN61)?

2. Troubleshooting procedure


Remove power cord and plug in again in approx. 5 seconds.
Is STD lamp blinking?
No
Check as in the procedure "No Power".
Yes
Does operation start when swing button of the remote control unit pushed?
Yes
Normal
No
Voltage at pin #57~#60 of micom (IC04) change?(Squarewave)
No
Micom (IC04) is faulty.
Yes
Voltage at pin #2 ~ #3 of CN61(motor connector) change?(Squarewave)
No
Driver IC05/06 (ULN2003A) is faulty.
Yes
Up/Down louver motor is faulty.

12-2-4 In the HEAT mode, When there is no warm air current. Check this first;

1. Is the set temperature of Remote Control lower than room temperature in Heat mode?
2. Is the Indoor PCB properly connected with the CN71 connector?


After training on, the heating operation should start in 5 minutes.
Yes
Normal
No
Is the number #38 of Micom (IC04) DC5.0V?
No
Abnormal Micom
Yes
Is the number checking #11 of IC05 (ULN2003A) LOW?
No
Abnormal IC05
Yes
Is the voltage between CN71 #1 and CN71 #5 rating voltage ±10% range
No
Abnormal RY73
Yes
Abnormal 4-Way valve of Outdoor Unit. or connecting Cable
PCB should be replaced.
4-Way valve should be replaced or connecting Cable Check.

12-2-5 When the remote control is not receiving

1. Check if the connector was normally assembled.

2. Put the set in operation and check the voltage of No. 15(+) and No. 16(-) of the main PCB CN91 while operating the remote control. When the voltage descends below 3V, the assembly module PCB is normal and the main PCB is poor. Then replace the main PCB.

3. Replace the assembly display PCB because the module PCB is poor if the voltage between No. 15~16 of CN91 maintains 5V after the remote control starts operation.

12-3 PCB Inspection Method

12-3-1 Pre-inspection Notices

1. Check if you pulled out the AC power plug when you eliminate the PCB or front panel.
2. Don't hold the PCB side not impose excessive force on it to eliminate the PCB.
3. Don't pull the lead wire but hold the whole housing to connect or disconnect a connector to the PCB.

12-3-2 Inspection Procedure

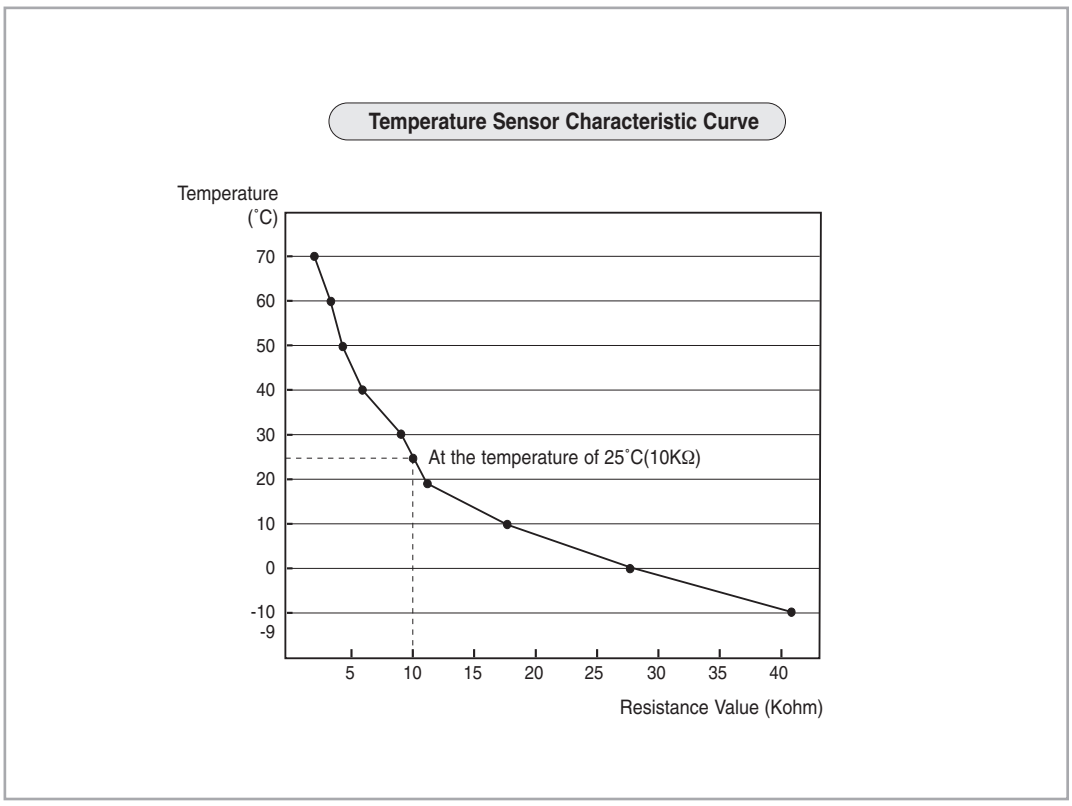
1. Check connector connection and peeling of PCB or bronze coating pattern when you think the PCB is broken.
2. The PCB is composed of the 3 parts.
   - **Main PCB Part** : MICOM and surrounding circuit, relay, room fan motor driving circuit and control circuit, sensor driving circuit, power circuit of DC12V and DC5V, and buzzer driving circuit.
   - **Display part** : LED lamp, Switch, Remocon module

12-3-3 Detailed Inspection Procedure

No	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the electronic box. Check the PCB fuse.	1) Is the fuse disconnected? (F701)	• Overcurrent • Indoor Fan Motor Short • AC Part Pattern Short of the MAIN PCB
2	Supply power. If the operating lamp twinkles at this time, the above 1)~3) have no relation.	Checking the power voltage.	
		1) Is the DB71input voltage AC200V~AC240V?	• Power Cord is fault, Fuse open. Wrong Power Cable Wiring, AC Part is faulty.
		2) Is the voltage between both terminals of the C103 on the 2nd side of the transformer DC12V ±0.5V?	• Switching Trans or Power Circuit is faulty
		3) Is the voltage between both terminals of OUT and GND of IC02(KA78L05) DC5V ±0.5V?	• Power Circuit is faulty, Load Short
3	Press the ON/OFF button and operate TURBO mode. But, exclude the RESERVE operation.	Checking the power voltage.	
		1) Check the voltage of the relay(RY71) coil(IC05 PIN #11 and GND : 0V, PIN#6 and GND : 5V) during operation(3 minutes after TURBO operation).	• Relay(RY71) Coil Disconnection, IC05 is faulty
		2) Check the voltage of both terminals of terminal block 1 and N(1) after 3 minute operation.: AC220V	• Relay(RY71) Contact is faulty
4	Press the ON/OFF button. 1. FAN Speed [High] 2. Continuous Operation	1) Is the voltage over AC180V being imposed on terminal #3 and #5 of the fan motor connector(CN72)?	• Fan Motor of the indoor is faulty
		2) The fan motor of the indoor unit doesn't run.	• Fan Motor Connector(CN72) is faulty
		3) The power voltage between terminal #3 and #5 of the connector(CN72) is 0V.	• ASS'Y Main PCB is faulty • Connection is faulty

12-3-4 Temperature Sensor Feature Conversion Table(Room Temperature Sensor); 103AT

Temperature [˚C]	Sensor Resistance [Kohm]	Temperature [˚C]	Sensor Resistance [Kohm]	Temperature [˚C]	Sensor Resistance [Kohm]	Temperature [˚C]	Sensor Resistance [Kohm]
70	2.229						
69	2.296	49	4.300	29	8.622	9	18.700
68	2.365	48	4.444	28	8.944	8	19.480
67	2.437	47	4.594	27	9.281	7	20.290
66	2.512	46	4.749	26	9.632	6	21.150
65	2.589	45	4.912	25	10	5	22.050
64	2.669	44	5.080	24	10.380	4	22.990
63	2.752	43	5.256	23	10.780	3	23.900
62	2.838	42	5.439	22	11.200	2	25.030
61	2.928	41	5.630	21	11.630	1	26.130
60	3.021	40	5.828	20	12.090	0	27.280
59	3.116	39	6.033	19	12.560	-1	28.470
58	3.216	38	6.246	18	13.060	-2	29.720
57	3.319	37	6.468	17	13.570	-3	31.040
56	3.426	36	6.699	16	14.120	-4	32.430
55	3.537	35	6.941	15	14.680	-5	33.890
54	3.652	34	7.192	14	15.280	-6	35.430
53	3.772	33	7.455	13	15.900	-7	37.050
52	3.897	32	7.729	12	16.550	-8	38.760
51	4.026	31	8.015	11	17.240	-9	40.560
50	4.161	30	8.313	10	17.960		

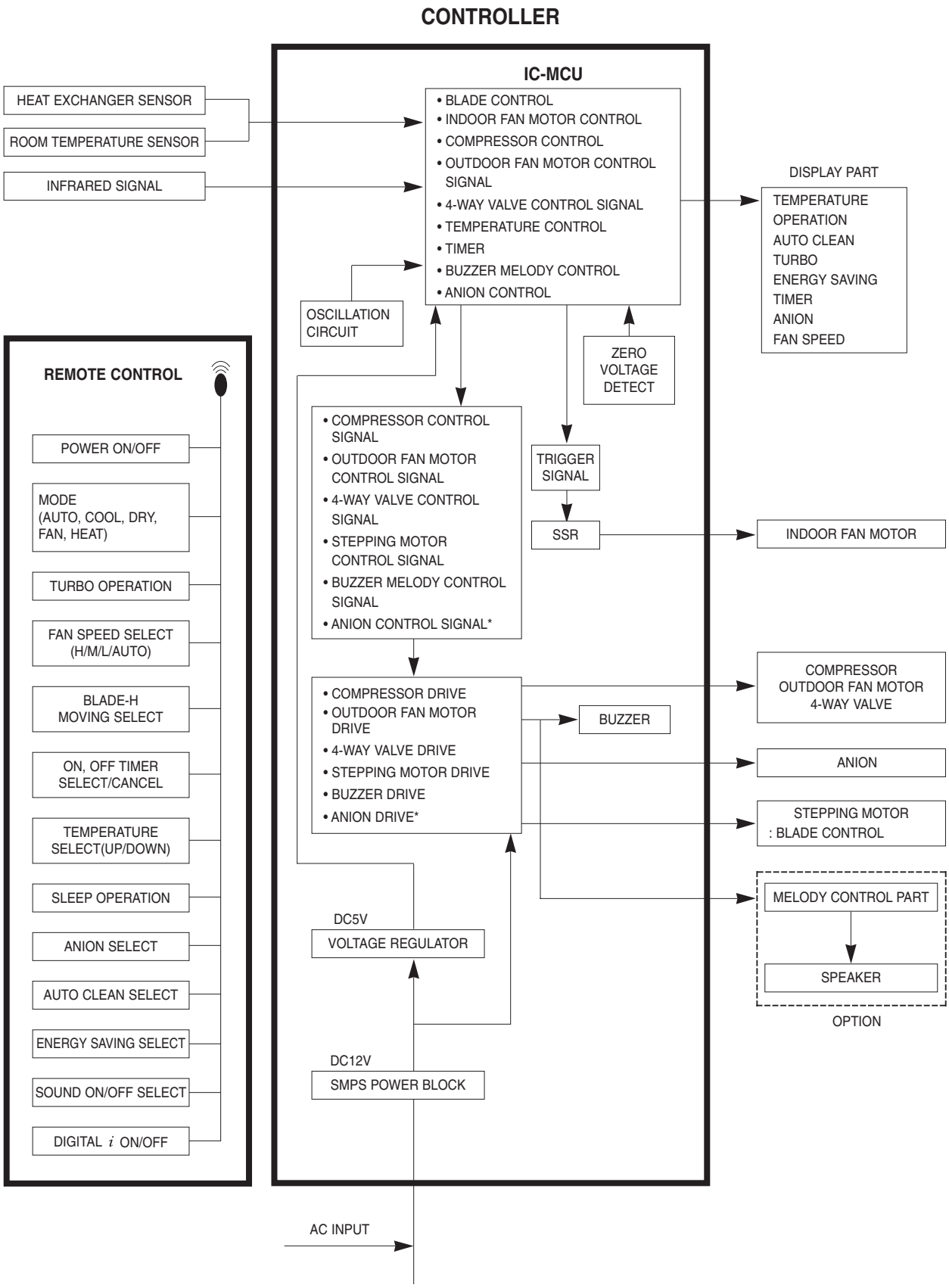


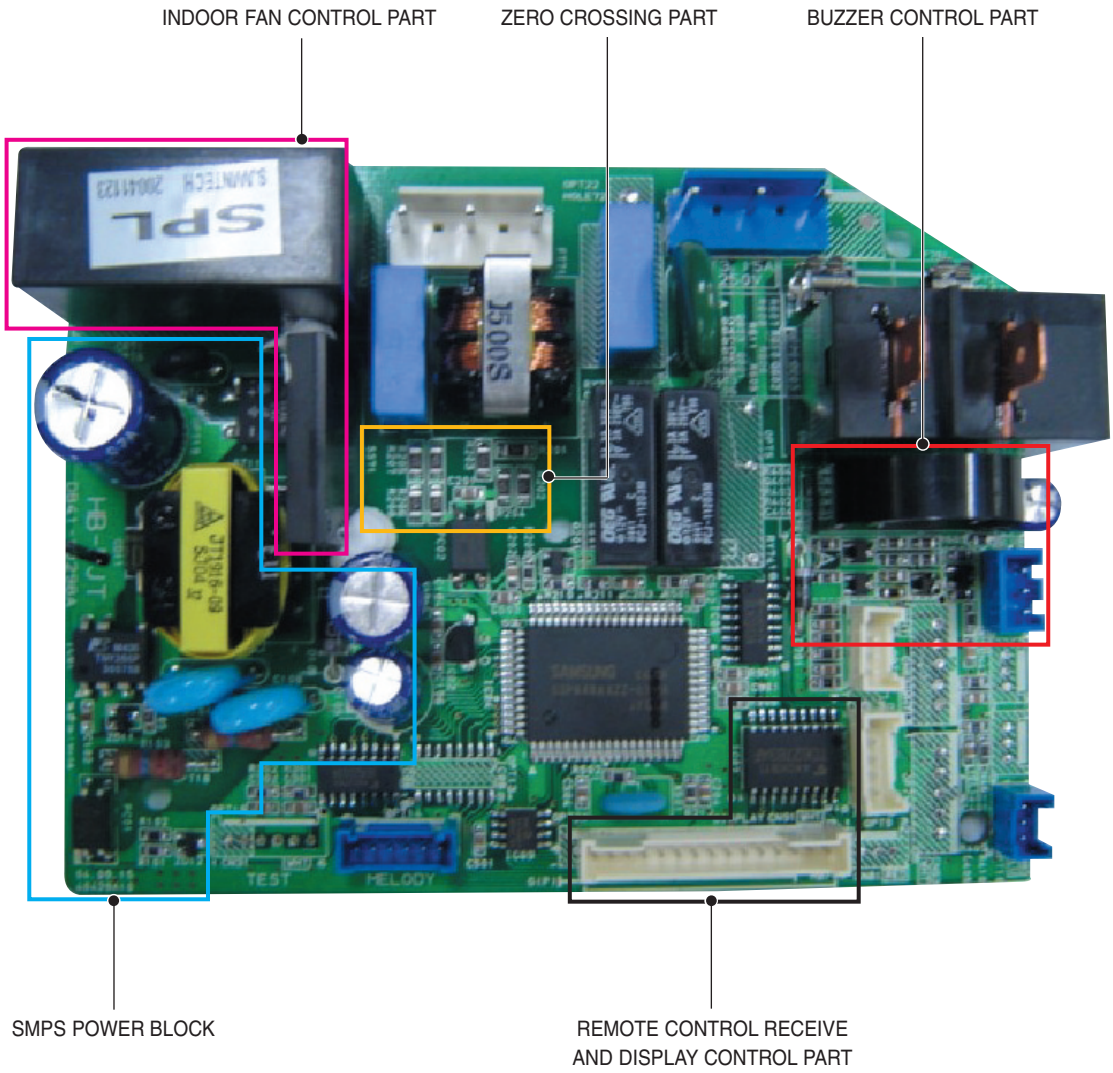
12-4 Main Part Inspection Method

<table>
<tr><th>Part</th><th colspan="2">Breakdown Inspection Method</th></tr>
<tr><td>Room Temperature Sensor</td><td colspan="2">Measure resistance with a tester</td></tr>
<tr><td></td><td>Normal</td><td>At the normal temperature 37kΩ~ 8.3kΩ(-7˚C~+30˚C) *Refer to Table 12-3-4.</td></tr>
<tr><td></td><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
<tr><td>Room Fan Motor</td><td colspan="2">Measure the resistance between terminals of the connector (CN72) with a tester.</td></tr>
<tr><td></td><td>Normal</td><td>At the normal temperature (10˚C ~ 30˚C)
<table>
<tr><th>Compare terminal</th><th>Resistance</th><th>Remark</th></tr>
<tr><td>Yellow, Blue</td><td>404.4Ω ± 10%</td><td>Main</td></tr>
<tr><td>Yellow, Red</td><td>340Ω ± 10%</td><td>Sub</td></tr>
</table></td></tr>
<tr><td></td><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
<tr><td>Outdoor Fan Motor</td><td colspan="2">Measure the resistance between motor wires with a tester.</td></tr>
<tr><td></td><td>Normal</td><td>At the normal temperature (10˚C ~ 30˚C)
<table>
<tr><th>Compare terminal</th><th>Resistance</th><th>Remark</th></tr>
<tr><td>Yellow, Red</td><td>360Ω ± 10%</td><td>Main</td></tr>
<tr><td>Black, Yellow</td><td>328Ω ± 10%</td><td>Sub</td></tr>
</table></td></tr>
<tr><td></td><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
<tr><td>Stepping Motor</td><td colspan="2">Measure the resistance between the red wire and each terminal wire with a tester.</td></tr>
<tr><td></td><td>Normal</td><td>About 300Ω at the normal temperature (20˚C ~ 30˚C)</td></tr>
<tr><td></td><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
</table>

13. Block Diagram

* : OPTION



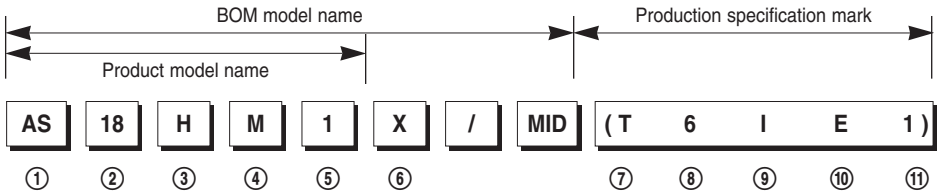

INDOOR FAN CONTROL PART
ZERO CROSSING PART
BUZZER CONTROL PART
SMPS POWER BLOCK
REMOTE CONTROL RECEIVE
AND DISPLAY CONTROL PART

14. Reference Sheet

14-1 Index for Model Name

✳ Project model code for overseas from 2004(Window type/Split type/PAC)

Model Code



① Product classification	
AW	Window type
AS	Split type
AP	PAC

② Capacity(Btu)

③ Function	
C	Cooling Only
H	Heat pump
T	Heater

④ Design (Compressor mark available)		
Window type		
Split type	P	HB(For Western)
	M	HB(For others)
PAC		

⑤ Version No. (Production specification mark per model)	
Window type	Analog : Numeric
	Digital : English
Split type	R22 : Numeric
	R410 : English

⑥ When marking the indoor/ outdoor units separately	
None	SET
N	Indoor Unit
X	Outdoor Unit

⑦ Compressor/ Refrigerant specification	
N	Normal
T	Tropical
A	R410
V	Inverter (R22)
B	Inverter (R410)

⑧ Outdoor unit type	
2	PD_MR(00R)
U	PD2_MR

⑨ Project(sash)	
I	Interior

⑩ Power	
A	115V/60Hz
B	220V/60Hz
C	208~230V/60Hz
D	200~220V/50Hz
E	220~240V/50Hz
F	220V/60Hz/3 phase
G	380V/50Hz/3 phase

⑪ Option

• Except the window type for USA & Models for China

14-2 Refrigerant Pressure during the Charging

Outdoor Unit Temperature	Low Pressure kg/cm²(PSIC)
Less than 20˚C	4.5 ~ 4.7(64~67)
Less than 24˚C	4.7 ~ 4.8(67~68)
Less than 28˚C	4.8 ~ 4.9(68~70)
Less than 32˚C	4.9 ~ 5.0(70~71)
Less than 36˚C	5.0 ~ 5.1(71~73)
Less than 40˚C	5.1 ~ 5.2 (73~74)
Less than 44˚C	5.2 ~ 5.3 (74~75)

14-3 Pressure & Capacity mark

■ Power/Heat

W	cal/s	kcal/h	Btu/h	HP	kg·m/s	ib·m/s
1	0.23885	0.85985	3.4121	0.001341	0.10197	0.73756
4.1868	1	3.6	14.286	0.0056146	0.42693	3.088
1.163	0.27778	1	3.9683	0.0015596	0.11859	0.85778
0.29307	0.06999	0.252	1	$3.9302x10^{-4}$	0.029885	0.21616
745.7	178.11	641.19	**2,544.4**	1	76.04	550
9.8067	2.3423	8.4322	33.462	0.013151	1	7.233
1.3558	0.32383	1.1658	4.6262	0.0018182	0.13826	1

14-4 Q & A for Non-trouble

Classification	Class	Description
Cooling	**Q**	**The cooling is weak.**
	A	When it is hot outside, its cooling capacity decreases due to the increase of the ambient temperature. When the dust filter gets blocked or warm outside air gets in, the cooling capacity will decrease. So, make sure to clean the dust filter frequently, prevent heat loss by closing the doors and insulate the cooling area by using curtains, blinds, shades or window tinting.
	Q	**The cooling is good generally. But, it gets weak when it is considerably hot.**
	A	It occurs when the outdoor unit is exposed to direct sun light and heat-up air is not ventilated well. So, set up a sunblind over the outdoor unit and keep stuff away from the unit to increase the ventilation. When the cooling capacity decreases during a heat wave, clean the heat exchanger of the outdoor unit or spray some cold water to the heat exchanger to increase the cooling capability.
	Q	**The cooling is weak. Does it need refrigerant charging?**
	A	It is not correct charging refrigerant regularly. Except that you have moved in several times or the connection pipes are broken, the refrigerant does not run low. So, when refrigerant is additionally charged, it could be costly and cause a product's failure. When the refrigerant leaks, all of it will escape in a short time resulting in cooling failure and no water coming out of the drain hose. So, if water comes out from the drain hose, it indicates the normal operation of the product and it does not need refrigerant charging.
	Q	**It fails to do cooling.**
	A	When the air conditioner is set to Ventilation or the desired temperature is set higher than the current temperature, it fails to do cooling. In this case, select Cooling or set the desired temperature lower.
Leakage	**Q**	**It floods the floor.**
	A	Place the drain hose properly. When it is not placed properly, the drain water would flow back flooding the floor. So, straighten out the drain hose for the water to be drained well.
	Q	**Water drips at the drain connection (service valve) of the outdoor unit.**
	A	When a glass bottle is taken out of the refrigerator, moisture gets condensed on its surface due to the temperature differences. The same principle applies to the air conditioner. When cold refrigerant goes through the copper tube, moisture gets condensed on the surface of the tube and the connection areas. To prevent the water condensation, the pipes are insulated. But, the connection areas of the outdoor unit are not insulated for the purpose of maintenance or repair, and water gets condensed due to the temperature differences and drips down. Generally, it evaporates right away. But, when it drips much during muggy days, put a water pan on the floor.
	Q	**It leaks even though a drain pump is used.**
	A	It occurs when the drain pump is plugged out or it is out of order. Check the power of the drain pump and the position of the drain hose, and when the pump is faulty, contact the drain pump manufacturer. Samsung Electronics do not manufacture drain pumps. So, we are not able to correct the drain pump problems.
Smells	**Q**	**Whenever the air conditioner is turned on, it irritates my eyes and gives me a headache.**
	A	There are no components in the air conditioner irritating the eyes and sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So, find and root out the smell sources. Generally, it occurs at a interior renovated place, a pharmacy, a gasoline handling place, a tire shop, a second-hand book shop or an electronic

Classification	Class	Description
		component handling place; when its chemical or musty smells are sucked in and sent out, it can be misled that the air conditioner generates them. So, find and root out the problem or refresh the room frequently.
	Q	**Whenever the air conditioner is turned on, it stinks.**
	A	There are no components in the air conditioner sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So, find and root out the smell sources. Generally, when the drain hose is taken out to the washing room or there are sources of smells such as a diaper bin, a shoe shelf or a socks bin, bad smells generate. Also, it occurs where glass cleaners or air fresheners are used; when they are sucked in interacting with dusts and moistures inside, bad smells generate. These kinds of organic materials noxious to human bodies. So, we recommend against the use of them.
	Q	**Whenever the air conditioner is turned on, it smells sour.**
Smells	A	When the room is papered recently, its paste smells would be sucked inside. Also, when the air conditioner is installed in the study room of young boys loving sweat-generating activities such as the basketball, excessive sweats evaporate and get sucked into the air conditioner resulting in bad smells. So, find and root out the problem or refresh the room frequently.
	Q	**Whenever the air conditioner is turned on, it smells musty.**
	A	It is due to the improper keeping of the product after its use. When keeping the product, dry up the inside with the operation of Ventilation to prevent must. When the product is kept without drying up the inside with Ventilation, mold would grow inside resulting in must. So, open the windows and switch on the Ventilation function to get rid of the saturated smell inside.
	Q	**Whenever the air conditioner is turned on, it sends out bad smells such as stale smells.**
	A	It occurs generally when there are pet animals in the house. Their smells stay at the same place. But, when the air conditioner is turned on, the air gets circulated resulting in the circulation of the smells. So, find and root out the problem or refresh the room frequently.
	Q	**It sends out bad smells.**
	A	When the air filter is filthy, it could send out bad smells. So, clean the filter and ventilate the room with the windows open while operating the Ventilation function.
	Q	**It won't start.**
	A	There is a power failure or it is plugged out. Also, check if the power distribution panel is switched off.
	Q	**It goes off during operation.**
Operation	A	When the hot air does not escape properly, it goes off during operation. It occurs when it does not ventilate properly because the outdoor unit is covered, the back of the outdoor unit is blocked by a cardboard or a plywood panel, and the front of the outdoor unit is blocked by the closed window or other obstacles. Clear the above obstacles from the outdoor unit.
	Q	**It generally works properly. But, when it's considerably hot, it goes off during operation.**
	A	It occurs when the outdoor unit is exposed to direct sunlight and the hot air does not escape properly. Set up a sun blind over the outdoor unit and clear the neighboring obstacles from the outdoor unit to provide good ventilation. When it goes off frequently during a heat wave, it would prevent the turn-off and increase the cooling capacity cleaning the outdoor unit or spraying some water to the heat exchanger.

Classification	Class	Description
Operation	**Q**	**The remote controller won't operate.**
	A	When the batteries run out or the transmitter or receiver of the remote controller is blocked by obstacles, change the batteries or keep the obstacles away from the controlling area. Also, the remote controller may not work under intensive light from a 3-wavelength lamp or a neon sign due to the EMI. In this case, take the remote controller closer to the receiver.
Installation	**Q**	**Who installs the air conditioner? (Relocation/Re-installation)**
	A	When relocating or re-installing the air conditioner, make sure to contact Samsung Electronics Service Center or Authorized Service Agent and have them to do the job. (If not, it could cause personal injury or product damage.) The cost for the relocation/re-installation of the air conditioner is subject to the customer's expense. There is a cost table. But, our service engineer needs to visit to total up the cost correctly. When you move in, make sure to contact Samsung Electronics Service Center or Authorized Service Agent in advance to streamline the process.
	Q	**Is it possible to install the outdoor unit outside?**
	A	It is possible to install it at a designated place in the apartment or on the rooftop nearby. But, it's illegal hanging an angle iron case with the outdoor unit in it outside the apartment. Also, it is illegal obstructing passers-by with the outdoor unit installed outside.
	Q	**What can be done to install the outdoor unit facing the road because it is a commercial building?**
	A	The following is an excerpt from Building Code going into effect from JUNE 1st 2005. "The exhaust pipe of a cooling or ventilation facility installed in a building adjacent to the streets of commercial or residential areas shall be installed higher than 2 m to prevent the exhaust air from blowing directly to passers-by and the current facilities shall be corrected by MAY 31st 2005." So, please install it higher than 2 m or not to blow the hot exhausting air directly to passers-by.
	Q	**What about installing a windscreen during installation not to blow hot air directly to passers-by?**
	A	When the hot air from the front of the outdoor unit is blocked, the product's performance will be affected and it will fail to operate properly. So, keep it at least 300mm away from its surrounding walls and give it good ventilation.

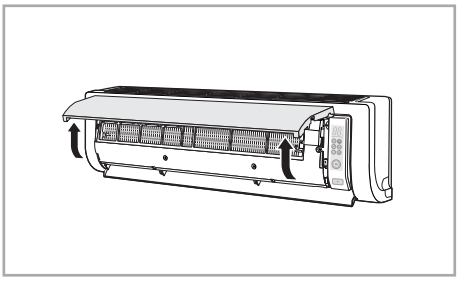
14-5 Cleaning/Filter Change

14-5-1 Cleaning your Air Condition

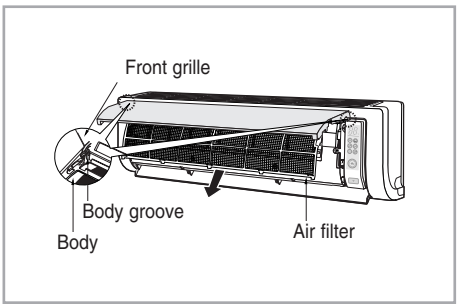
For the best use of your air conditioner, you must clean it every 2 weeks to remove the dust accumulated on the air filter.

⚠ • Before cleaning your air conditioner, check if you have turned off the circuit breaker.

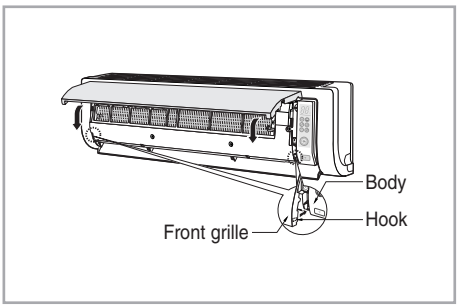
1. Open the front grille by pulling on the tabs on the lower right and left sides of the indoor unit.



2. Detach the front grille by pulling it forwards.
3. Hold the edge of the air filter under the front grille and pull to release.
4. Remove all dust on the air filter with a vacuum cleaner or brush.
5. When you finish, insert the top of the filter into the slot and fix it to 5 tabs of the grille.



6. Clean the front grille with a damp cloth and mild detergent (do NOT use benzene, solvents or other chemicals).
7. Reassemble the air filter and the front grille.

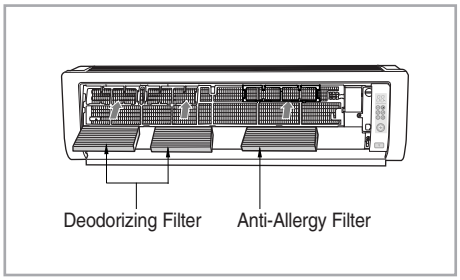


Note : • If you have not used the air conditioner for a long time, select the Fan mode for 3 to 4 hours to dry the inside of the air conditioner.

14-5-2 Cleaning Anti-Allergy and Deodorizing Filter (Option)

There are Anti-Allergy and Deodorizing filters inside your air conditioner.
They remove odours and dust in your room. You should clean the filters every 3 months.

1. Open the upper front grille by pulling the lower right and left tabs of the grille.
2. Pull out the Anti-Allergy and Deodorizing filter.
3. Wash the filters with clean water, then dry them in the shade.
4. Insert the filters in their place.
5. Close the front grille.



14-6 Installation

14-6-1 Before Installation

Keep the air conditioner outlet and inlet free from its surroundings.
In case of installation, keep the symmetry and fix it to prevent vibration.
The pipe length shall meet the standard as far as possible.

14-6-2 Installation Procedure

■ Location

Install the product in an area to guarantee the best cooling effect, convenience of piping and electric work, and inexistence of vibration or wind.

■ Wall Drilling

Drill the wall downward in a diameter of 60 to 65mm.

■ Fixing Indoor Unit & Outdoor Unit

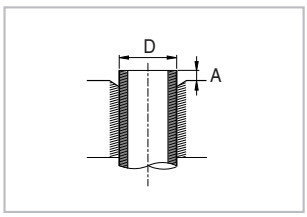
Fix the air conditioner indoor unit securely to the wall. Secure the outdoor unit in a suitable position.

■ Pipe Spooling & Connecting

You shall cut the pipe with a pipe cutter and grind all the burrs of the cut surface.
Pipe expansion may continue until the pipe surface becomes uneven or torn apart.
Be sure to use a torque wrench to tighten pipes or flare nuts.

<Torque & Depth>

Outer Diameter(D)	Torque(kgf·cm)	Depth(A)
6.35mm(1/4")	140~170	1.3mm
9.52mm(3/8")	250~280	1.8mm
12.70mm(3/8")	380~420	2.0mm



■ Leak Test

Put an inert gas like nitrogen in the outdoor unit pipe and put soap bubbles or other test liquids on the pipe surface for the leak test.

■ Drain Hose Connecting

Install the drain hose downward to drain water naturally. Be sure to pour water into the hose to check if it drains well.

■ Electric & Earth Work

Electric and earth work shall meet the "Electric Facility Technology Standard" and the "Internal Wire Regulation" of the Electric Business Laws.

■ Inspection & Trial Run

Upon completion of the tests, you shall make a trial run while you explain the main functions of the air conditioner to finish the installation.

14-7 Installation Diagram of Indoor Unit and Outdoor Unit

14-7-1 Air-Purge Procedure

1) Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.

2) Connect the charging hose of low pressure side of manifold gauge to the packed valve having a service port (3/8" Packed valve) as shown at the figure.

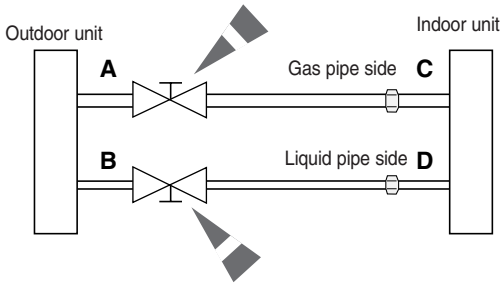
3) Open the valve of the low pressure side of manifold gauge counter-clockwise.

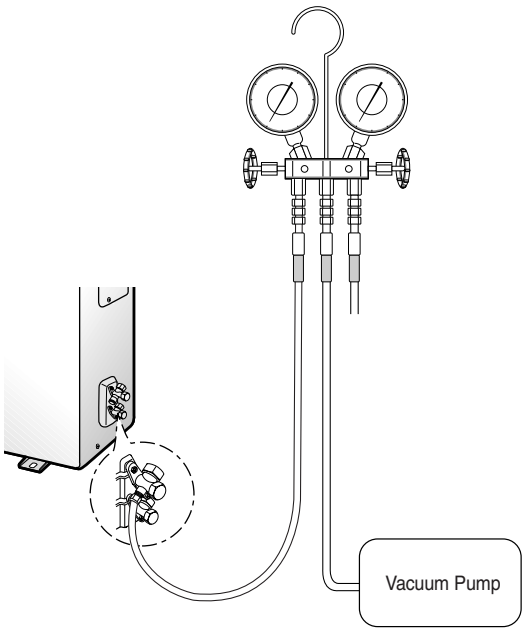
4) Purge the air from the system using vacuum pump for about 30 minutes.
   - After that, please recheck that pressure is stabilized.
   - Close the valve of the low pressure side of manifold gauge clockwise.
   - Remove the hose of the low pressure side of manifold gauge.

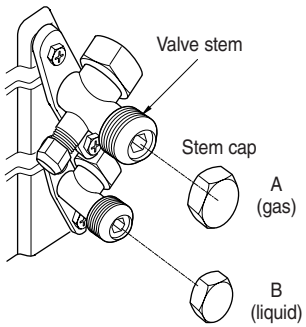
5) Set valve cork of both liquid side and gas side of packed valve to the open position.

6) Mount the valve stem nuts to the 2-Way and 3-Way valve. And mount the service port cap to 3-Way valve.

7) Check for gas leakage.
   - At this time, especially check for gas leakage from the 3-Way valve's stem nuts, and from the service port cap.







14-7-2 "Pump down" Procedure

Pump down will be carried out when an evaporator is replaced or when the unit is relocated in another area.

1) Remove the caps from the 3-Way valve and the 3-Way valve.

2) Turn the 3-Way valve clockwise to close and connect a pressure gauge (low pressure side) to the service valve, and open the 3-Way valve again.

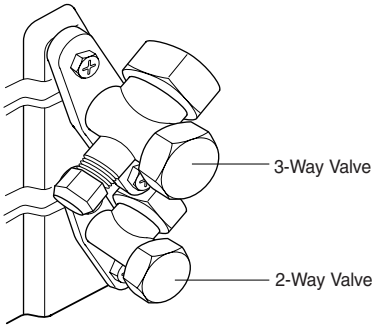
3) Set the unit to cool operation mode. (Check if the compressor is operating.)

4) Turn the 3-Way valve clockwise to close.

5) When the pressure gauge indicates "0" turn the 3-Way valve clockwise to close.

6) Stop operation of the air conditioner.

7) Close the cap of each valve.



Remarks

Relocation of the air conditioner

- Refer to this procedure when the unit is relocated.
- Carry out the pump down procedure (refer to the details of 'pump down').
- Remove the power cord.
- Disconnect the assembly cable from the indoor and outdoor units.
- Remove the flare nut connecting the indoor unit and the pipe.
- At this time, cover the pipe of the indoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
- Disconnect the pipe connected to the outdoor unit.
  At this time, cover the valve of the outdoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
- Make sure you do not bend the connection pipes in the middle and store together with the cables.
- Move the indoor and outdoor units to a new location.
- Remove the mounting plate for the indoor unit and move it to a new location.

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Printed in Korea.
Code No. DB98-24610A(1)